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# Sales and Advertising Rivalry in interwar US Department Stores

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# Sales and Advertising Rivalry in interwar US

## Department Stores

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Department stores represented one of the most advertising-intensive sectors of American inter-war retailing. Yet it has been argued that a competitive spiral of high advertising spending, to match the challenge of other local department stores, contributed to a damaging inflation of costs that eroded long-term competitiveness. We test these claims, using both qualitative archival data and establishment-level national data sets. Returns to stores' advertising are shown to have fallen over the period, while own advertising led to retaliatory advertising by rival department stores, which substantially lowered returns on advertising dollars in the 1930s (but not the 1920s).

*Key words:* Department stores, Interwar U.S. economic history, Advertising, Marketing

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The 1920s were a golden age for American advertising, national advertising expenditure rising from \$1.409 billion in 1919 to \$2.987 billion in 1929.<sup>1</sup> Department stores, which constituted the most important class of large-scale American retailer until the late 1920s, were particularly advertising-intensive.<sup>2</sup> In 1935, the 4,201 U.S. department stores accounted for some 10 per cent of national retail sales.<sup>3</sup> Yet their contribution to retail advertising was much larger, owing to a substantially higher ratio of promotional expenditure to turnover than was the case for most chain stores. Department stores devoted an average of 4.0 per cent of turnover to advertising during 1932, compared with median figures for the same year of 0.42 per cent for variety stores; 1.37 per cent for drug store chains; 1.02 per cent for grocery chains, and a mean of 2.98 per cent for shoe chains.<sup>4</sup> Department stores had been at the forefront of new innovations in advertisements since the late nineteenth century and during the interwar period they adopted increasingly sophisticated methods of both designing advertisements and monitoring their effectiveness.

Yet by the 1930s, both industry insiders and well-informed business academics were pointing to excessive advertising expenditure as one of the key factors undermining department store performance – through raising gross margins, which eroded department stores' competitive position vis-à-vis expanding chain stores operating on a lower-cost model. The onset of decline for the US department store sector occurred substantially earlier than was the case internationally. For example, British department stores experienced continued growth in retail market share and healthy profits, partly due to lower gross margins and operating costs compared to their American counterparts, which enabled them to more effectively address rising competition from the expanding multiple chains. Conversely, it is argued, US stores' higher-cost business model progressively undermined their profitability and, ultimately, survival - in their traditional form.<sup>5</sup>

This paper examines both the objectives and nature of U.S. department store advertising and its cost-effectiveness. Qualitative archival evidence, mainly concerning Macys of New York, the Higbee Co. of Cleveland, Ohio, and Filenes of Boston, is used to chart the development of department store advertising policy, media, and techniques. Then, after briefly reviewing contemporary arguments that advertising levels were excessive and produced illusory gains (owing to retaliatory advertising by rival department stores) we

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<sup>1</sup> Pope, *The Making of Modern Advertising*, pp.22-29.

<sup>2</sup> McNair, "Trends of expense"; Darby, *Story of the Chain Store*, p. 16.

<sup>3</sup> Hyppes, "Department store", p.76.

<sup>4</sup> McNair and May *American Department*, Table III-1, 22-23; other retailers, McNair, "Chain store", Tables 1 and 2.

<sup>5</sup> See Scott and Walker, "'British failure' that never was?".

assess the extent to which these claims are justified, using establishment-level data from the Harvard Bureau of Business Research archives. The archives provided two data sets - a panel of returns covering the years 1920-1940 and capturing the sales and advertising history of 29 department stores over this full twenty-year span – and a second study with data covering the early 1920s, providing an unbalanced panel of some 655 stores. Using these exceptionally rich and under-exploited data sources, we show that returns to US stores’ advertising fell over the period. As importantly, increases in store advertising budgets led to retaliatory expansions in advertising by rival department stores, that substantially lowered the returns on advertising dollars in the 1930s (but not in the 1920s). We also find that smaller stores obtained lower advertising returns than their larger counterparts.

### ADVERTISING POLICY

The rise of the first great American department stores such as Marshall Field’s in the second half of the nineteenth century was closely associated with their successful development of strong, consistent, and meaningful brand images to distinguish them from their competitors, command customer loyalty, and identify the store’s principal consumer market segment. Advertising both facilitated the projection and adaption of brand images and allowed retailers to capitalize on distinctive branding by communicating their brand to its target market.<sup>6</sup> During the late nineteenth century department store advertising innovations transformed U.S. newspaper advertising, including the pioneering of the full-page advert by John Wanamaker in 1879; the introduction of drawings and illustrations in adverts; innovations in typography and layout; and the development of ‘institutional advertising’ aimed at advertising the store as a brand – rather than the individual products sold.<sup>7</sup>

Stores initially faced their main competition from other local or regional department stores – though this was limited by the fact that each occupied its own market niche, reinforced by aggressive branding and advertising. For example, the Higbee Co. of Cleveland Ohio, a long-established department store opened in 1860, had five main stores that could be regarded as competitors during the 1930s.<sup>8</sup> Yet most of its competition came from three stores: the May Co. – which aimed at a wider market than Higbee and competed on price, and Linder and Halle – two up-market stores which competed in terms of quality of merchandise

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<sup>6</sup> Koehn, “Marshall Field”.

<sup>7</sup> Benson, *Counter Cultures*, pp.17-18.

<sup>8</sup> Baker Library Archives, M.ss 776, papers of the Higbee Co., Higbee comparison questionnaire, 1932.; idem, ‘General report and recommendations,’ October 10<sup>th</sup>-15<sup>th</sup>, 1932. These included four department stores and one apparel speciality store.

(particularly with regard to fashion items). Even this level of competition was partly due to Higbee's attempt to serve a relatively broad market segment; as a 1932 comparison shoppers' report noted, by doing so it both failed to offer the variety of merchandise and appropriate goods for the 'popular' market served by the May Co. and overlooked the fashion-based competitive threat from Linder and Halle.<sup>9</sup>

Distinct branding was particularly important, given that department stores sold a high proportion of fashion-related, durable, and 'luxury' goods, characterised by segmented markets. As another Higbee policy document noted, customers generally fell into three broad groups - frequenting 'high grade'; 'medium grade' or 'low grade' stores. While high grade and medium grade stores shared many customers, as did medium grade and low grade stores, few customers' purchasing habits spanned the high and low grades.<sup>10</sup> Strong market segmentation also increased the importance of repeat business and customer loyalty. Thus department stores were early pioneers of 'relationship marketing'. John Wanamaker had pioneered the relationship marketing approach to department store retailing in the late nineteenth century, based on the philosophy of 'reciprocity' and 'mutuality of interest' between the store and its customers. This encompassed a leisure-based retail format, underpinned by generous provision of service facilities; allowing customers to return products they were not satisfied with; and an advertising philosophy based around marketing the store as an institution.<sup>11</sup> By the 1920s 'institutional advertising', aimed at imprinting stores' overall brand images in the minds of the consuming-public, rather than relying on claims regarding particular merchandise, had become the standard approach to department store advertising.<sup>12</sup> For example, Filene's of Boston developed a strong institutional focus for its advertising, the primary object of which was: 'to sell to the public our store as a whole rather than individual departments and individual merchandise...'<sup>13</sup> Strength in fashion goods was described as their 'greatest single "institutionalising" factor' – the store's institutional appeal being summed up as 'leadership in the showing of new styles, in choice of styles, in completeness of assortment, in service and in values' – while their range of services provided an important subsidiary attraction.<sup>14</sup>

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<sup>9</sup> Baker Library Archives, M.ss 776, papers of the Higbee Co., report of Higbee's comparison shoppers, October 10<sup>th</sup>-14<sup>th</sup> 1932.

<sup>10</sup> Baker Library Archives, M.ss 776, papers of the Higbee Co., 'General report and recommendations,' October 10<sup>th</sup>-15<sup>th</sup>, 1932.

<sup>11</sup> Tadjewski, 'Relationship marketing at Wanamaker's'.

<sup>12</sup> Benson, *Counter Cultures*, p.103.

<sup>13</sup> Worcester Historical Museum, William Filene's Sons Co., 'Publicity responsibilities', memorandum (1928).

<sup>14</sup> Ibid.

Filene's advertising policy was designed to constantly reflect this fashion orientation which, it emphasised, should never be subordinated to price or other appeals.<sup>15</sup> For example, when selecting merchandise to feature in newspaper advertising and window displays the highest priority was accorded to style and the lowest to profit margins on the specific items displayed - in order to project the right image for the store. Efforts to project an expertise in fashion included production of a fashion magazine, *Clothes*, from around 1922. This was formatted more like a women's magazine than a conventional catalogue, with much space given over to advice regarding new fashions and how to wear them, together with items on specialist clothing – for example for sports, maternity, or weddings. Illustrations tended to show women in different social settings, dressed in the latest fashions, rather than explicitly advertising specific items of clothing.<sup>16</sup> Other department stores also developed magazine-format promotional material; for example, the Rochester department store Sibley, Lindsay and Curr produced a *Juvenile Magazine* for the children of its patrons. Again, its consumption messages were subtly interweaved within more conventional magazine items such as puzzles and stories.<sup>17</sup>

America's largest department store, Macy's of New York, was similarly keen to project a strong institutional image in its advertising. As one of its executives informed its management trainees in 1929, 'Macy's is anxious to be known as an institution, and must therefore offer services and policies which are distinctive.'<sup>18</sup> These included the firm's cash-only policy, its underselling strategy, and the extremely wide assortment it offered. Advertising reflected these perceived strengths, using tag lines such as 'It's smart to be thrifty,' and 'No one is in debt to Macy's,' or emphasising the wide assortment of products offered by its different departments.<sup>19</sup> This institutional appeal also influenced the visual style of Macy's adverts. Both 'arty' advertising and superlative statements were consciously avoided, on the grounds that Macy's served a middle class market and should therefore employ a conservative style.<sup>20</sup> Similar policies were evident at Higbee Co. As F. M. Cochran of Higbee's advertising department explained at an executive training lecture of September 1938, that they used advertising to:

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<sup>15</sup> Ibid.

<sup>16</sup> Boston Public Library, Filene's marketing archive, C12, D1. Examples of Filene's 'Clothes' magazine, 1924-28.

<sup>17</sup> Elvins, *Sales & Celebrations*, p.29.

<sup>18</sup> Baker Library Archives, Mss 776, R.H. Macy & Co. Papers, Box 6, Macy's documentary history, 'Advertising policy: Series I, Lecture III', Executive Training Course, Jan-April, 1929, lecture by Mr Collins.

<sup>19</sup> Baker Library Archives, Mss 776, R.H. Macy & Co. Papers, Box 6, Macy's documentary history, 'Advertising policy: Series I, Lecture III', Executive Training Course, Jan-April, 1929, lecture by Mr Collins.

<sup>20</sup> Ibid.

... Sell the store as Well as the Merchandise... at one and the same time... It's done with short, subtle, confident statements such as:

“This blanket comes up to the Higbee standard of quality”

“Another Higbee fashion scoop”

“We're first again – with the newest bag of the season”

“This is another Higbee service for your convenience – there is no charge”

... to convince the customer with a few brief words that your store is outstanding for fashion ... that it will help her with her problems... that it strives to make her shopping convenient and comfortable... that it assures her satisfaction by safe-guarding quality... that it saves her money and offers her many prices from which she may select the one which fits her budget.<sup>21</sup>

Newspaper advertising dominated stores' publicity budgets, accounting for about 86 per cent of all department store advertising expenditure over 1932-39.<sup>22</sup> In addition to its direct advantages, heavy newspaper spend might also purchase the services of the local paper as a “booster” for the store – for example by promoting its merchandise in fashion feature columns.<sup>23</sup> However, other advertising media, such as direct mailings, posters, etc. often played a significant supporting or ancillary role. One significant new area of department store advertising was radio. Higbee broadcast a 15 minute radio programme six days a week during the 1930s. This was again used primarily as an instrument of institutional advertising: ‘the job of a department store radio program is to sell to the public... the best thing to sell year in, year out, is the store itself, its friendliness, its interest in civic affairs, its position as a center of community activities.’<sup>24</sup> Thus Higbee sought to embed itself in the minds of listeners as a major social institution, for example through offering free air-time to local clubs and voluntary institutions.<sup>25</sup> Elvins found that department stores in Buffalo and Rochester also supported civic promotions and arranged cooperative events with local clubs and charities in

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<sup>21</sup> Baker Library Archives, M.ss 776, papers of the Higbee Co., Mrs F. M. Cochran, ‘Advertising – its policies and procedures’ transcript of lecture for Higbee Co.’s executive training course, 23<sup>rd</sup> September 1938.

<sup>22</sup> Source: Table 1 (based on a simple average of all size groups shown in the Table). See also Benson, *Counter Cultures*, p.103.

<sup>23</sup> Elvins, *Sales & Celebrations*, p. 63.

<sup>24</sup> Baker Library Archives, M.ss 776, papers of the Higbee Co., ‘The functions of a public relations department, Elsa Conners (Ellen Conners on the air)’, transcript of lecture for Higbee Co.’s executive training course, 11 Oct. 1938.

<sup>25</sup> Baker Library Archives, M.ss 776, papers of the Higbee Co., ‘The functions of a public relations department, Elsa Conners (Ellen Conners on the air)’, transcript of lecture for Higbee Co.’s executive training course, 11 Oct. 1938. The document also mentions promoting a diverse range of other local groups such as the Cleveland symphony orchestra committee, Red Cross supporters, museums, and schools.

order to create 'goodwill' advertising and identify themselves more closely with their local communities.<sup>26</sup>

Macy's used both radio advertising and a variety of other promotional methods to reinforce its press adverts.<sup>27</sup> These included the launching of its famous Thanksgiving Day Parade in 1924, including (from 1927) giant helium-inflated rubber figures, designed by Tony Sarg. In some years the balloons were released into the sky to float away - cash prizes going to those who found the accompanying tags and returned them to the store.<sup>28</sup> Detroit's J. L. Hudson store also launched its first Thanksgiving Parade in 1924 - which, like Macy's' parade, became a major local institution in its own right. Charles F. Wendel, Hudson's display manager - drawing on Italian carnivals he had witnessed on holiday - incorporated giant papier mache heads carried on the shoulders of the marchers into his first parade; which became as characteristic a feature of Hudson's parades as Macy's inflated rubber figures.<sup>29</sup> Both events were designed to support the Christmas sales campaign: Macy's' first parade was entitled a 'Christmas Parade' (though it was held on Thanksgiving Day) and ended with Santa Claus being welcomed into Herald Square. Similarly, Hudson's parade included Santa's arrival by sleigh - to take up residence at the store's 'Toyland'. The success of these events is reflected by the fact that they were rapidly and widely copied by leading stores in other retail centres.<sup>30</sup>

Relationship marketing required the maintenance of customers' trust and by the 1920s department stores had become aware that consumers, particularly in more affluent income brackets, were becoming distrustful of sensational adverts. Thus major efforts were made to avoid risks of reputational damage from misrepresentation.<sup>31</sup> Filene's executives were warned to avoid exaggeration, misleading statements, and half truths. Small prizes were offered to members of the public, or employees, who spotted any misrepresentation.<sup>32</sup> Similarly, F. M. Cochran of Higbee's advertising department stated that their most important advertising principle was:

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<sup>26</sup> Elvins, *Sales & Celebrations*, pp. 35-38.

<sup>27</sup> Baker Library Archives, Mss 776, R.H. Macy & Co. Papers, Box 5, pp. 277-9, minutes of meeting, 3 April 1924.

<sup>28</sup> Baker Library Archives, Mss 776, R.H. Macy & Co. Papers, Box 15, unpublished chapters of Ralph M. Hower, *History of Macy's of New York, 1858-1919* (Cambridge: Mass, Harvard U.P., 1943). Chapter XIV, pp. 40-41. Wanamakers had earlier released giant balloons with prizes as a promotional stunt - Hendrickson, *Grand Emporiums*, p. 286.

<sup>29</sup> Detnews.com, <http://info.detnews.com/redesign/history/story/historytemplate.cfm?id=173>, copy of article originally published in Detroit News on 26<sup>th</sup> November 1999.

<sup>30</sup> Elvins, *Sales & Celebrations*, pp. 155-6..

<sup>31</sup> Benson, *Counter Cultures*, p.105.

<sup>32</sup> Worcester Historical Museum, William Filene's Sons Co., 'Publicity responsibilities', memorandum (1928).



TELL THE TRUTH ... THE TRUTH, THE WHOLE TRUTH... but NOT...  
NOTHING BUT THE TRUTH. Naturally, we attempt to glorify the truth with  
glowing copy and inviting illustrations... [But] half-truths are dangerous, and  
costly; and destructive to our greatest asset – the confidence and good will of our  
customers.<sup>33</sup>

Department stores took on board the new scientific and psychological approaches to  
advertising that had become popular by the 1920s.<sup>34</sup> Cochran argued that successful  
advertising executives ‘must be psychologists, interested in people of all types and social  
levels. They must be curious about what makes people “tick”.’ Reflecting the consensus that  
department stores’ principle customers were women, he added that they must be able to put  
themselves in the customer’s place; ‘feel her wants, her doubts... encourage her to have  
courage to dress better or create a lovelier home for herself.’<sup>35</sup> Meanwhile Macy’s extolled  
the scientific basis of their advertising planning. As their head of publicity told the *Dry  
Goods Economist*:

Formerly, a buyer would carry around in his head many various notions about  
advertisements that ‘pulled’ and advertisements that didn’t... Today we interview  
customers in the department and in their homes; we clock traffic inside and  
outside the store, and we key the responses to different types of advertisement in  
different media – newspaper, magazine, direct mail, car cards, billboards and  
even window display. Right now we are testing the pulling power of our  
windows. By clocking the number of people who pass by and the percentage of  
them that stop to look (it averages about one in twenty) – we attempt to measure  
sale response from windows as compared to an advertisement in the newspaper of  
the same merchandise on another day.<sup>36</sup>

Such monitoring of customer flow was widespread; one Buffalo department store even  
installed microphones by its front windows, to record spectators’ conversations  
regarding their displays.<sup>37</sup>

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<sup>33</sup> Baker Library Archives, M.ss 776, papers of the Higbee Co., Mrs F. M. Cochran, ‘Advertising – its policies  
and procedures’ transcript of lecture for Higbee Co.’s executive training course, 23<sup>rd</sup> September 1938.

<sup>34</sup> Olney, *Buy Now, Pay Later*, pp. 142-3 & 174-6.

<sup>35</sup> Baker Library Archives, M.ss 776, papers of the Higbee Co., Mrs F. M. Cochran, ‘Advertising – its policies  
and procedures’ transcript of lecture for Higbee Co.’s executive training course, 23<sup>rd</sup> September 1938.

<sup>36</sup> Baker Library Archives, Mss 776, R.H. Macy & Co. Papers, Box 12, Kenneth Collin, R.C. Macy (June 1<sup>st</sup>,  
1929), ‘Taking the Blindfold Test Out of Retail Business’, *Dry Goods Economist*, p38.

<sup>37</sup> Elvins, *Sales and Celebrations*, p. 22.

Planning Macy's £2,000,000 annual advertising budget was now said to be based on, 'the scientific basis of fact rather than the fond guesswork which characterises so much retail advertising.'<sup>38</sup> Advertising expenditure was carefully budgeted over each 26-week season. Account numbers were set up to monitor each item of expenditure and a weekly report traced progress through the season. This system was also applied to the advertising appropriations of its individual selling departments. Filene's policy was to divide their publicity budget by department in direct proportion to expected sales - with the exception of departments on the ground floor, which received a smaller budget on account of their opportunity to benefit from circulation brought in via other departments' advertising. A general fund (not exceeding 10 per cent of the total) was also set aside for departments which required extra funding on account of temporary conditions which made their sales inadequately reflect their needs.<sup>39</sup> Frederick Loeser & Co. of Brooklyn, New York took a more sophisticated approach, dividing advertising spend between departments based on their contribution to store sales and profits and their advertising to sales ratio – together with available data on these indicators for the same departments in other stores.<sup>40</sup> Similarly, by 1930 J.L. Hudson were looking at the advertising-elasticity of their different departments, using data on previous movements in advertising spend and sales volumes to plan current allocations.<sup>41</sup>

### THE RISING TREND OF COMPETITION

While the content and planning of department store advertising became more sophisticated over the interwar period, advertising budgets outpaced the growth of sales and profits and widespread doubts emerged both within the industry and among well-informed commentators regarding the productivity of this rising advertising spend. Analysis by Cover *et al.* of total department store advertising space carried by the Chicago Daily News and Chicago Tribune over 1910-31 showed an abrupt increase in department store advertising over 1918-20 and a rate of growth during the first half of the twenties which continued to outpace the pre-1918 trend.<sup>42</sup> Rising expenditures continued until the early 1930s; as Figure 1 shows, advertising expenses as a proportion of net sales for U.S. department stores rose from 2.0 per cent in 1920 to a peak of 4.0 per cent over 1932-33. It then declined slightly, yet

<sup>38</sup> Library Archives, Mss 776, R.H. Macy & Co. Papers, Box 12, Kenneth Collin, R.C. Macy (June 1<sup>st</sup>, 1929), 'Taking the Blindfold Test Out of Retail Business', *Dry Goods Economist*, p38.

<sup>39</sup> Worcester Historical Museum, William Filene's Sons Co., 'Publicity responsibilities', memorandum (1928).

<sup>40</sup> Meischeid, "Publicity budget"

<sup>41</sup> West Yorkshire Archive service, Leeds. WYL/1262/16, Schofields Department Store, Leeds, S. Schofield's journal of a tour of North America, visiting department stores, entry for 8<sup>th</sup> September 1930.

<sup>42</sup> Cover, Browne, Norris, and Cohenour, "Department store sales", pp.232-3.

remained significantly above the level of the 1920s. Conversely net operating profits began to fall after 1923, declined continuously from 1927-32 and (despite a recovery over the mid-late 1930s) were positive only for three years during the 1930s.<sup>43</sup>

**[Figure 1 near here]**

Benson described the period from 1924-29 as a battle to increase sales volumes in the face of rising gross margins. The results of this competitive spiral of promotion were inflated advertising expenditures, reduced margins, costly mark-downs, and falling profits.<sup>44</sup> In 1937 Hyppes characterised the interwar years as a period in which merchandising and advertising skill dominated competition between department stores. Their high fixed costs made profits very sensitive to sales volumes and, in turn, made initiatives to increase sales via aggressive advertising campaigns highly tempting.<sup>45</sup> 'High pressure' promotional techniques temporarily boosted sales, but high costs and competition (including the growing threat from speciality and chain stores) wiped out much of the expected growth in long-term profits. Competition via more elaborate stores and customer services (such as credit, delivery, return privileges, etc.) further raised costs.<sup>46</sup>

Meanwhile, Hypps argued, the gains from this increased expense were largely negated by rising competition from expanding chain and speciality stores operating on a lower cost model, who took advantage of department stores' rising gross margins by undercutting them on price.<sup>47</sup> Pasdermadjian similarly argued that department store efforts to expand business via costly advertising and services, or sales promotion events involving temporarily slashing margins, generally failed to produce a sufficient increase in revenue to justify the costs involved.<sup>48</sup> Stores, it was argued, had become locked into a 'high promotion regime' where the heavy advertising and promotion of their competitors compelled them to undertake similarly heavy expenditure, despite the fact that most of the gains would be negated by retaliatory action. In the depression and its aftermath, stores found it difficult to retreat from the high cost competitive equilibrium which they had become locked into. Meanwhile increased advertising expenditure, high-pressure advertising techniques, and costly sales promotions, were said to be much more characteristic of department stores than other retailers and were, 'mainly weapons of department stores in the competition within their own ranks... The final result of such contests is that all stores adopt these costly customer

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<sup>43</sup> McNair and May, *American Department Store*, pp.22-23.

<sup>44</sup> Benson *Counter Cultures*, p. 55.

<sup>45</sup> Pasdermadjian, *Department Store*, p. 55.

<sup>46</sup> Hypps, "Department store", pp. 74-9.

<sup>47</sup> *Ibid*, p.74.

<sup>48</sup> Pasdermadjian, *Department Store*, pp.55-58.

attraction methods and in the end the average expense level of all department stores is simply raised.’<sup>49</sup>

Such views are echoed in the internal records of the department stores examined for this study. For example, a letter of February 1934 from E.H. Stewart of the department store group Associated Dry Goods Corporation, to C. L. Bradley of the Higbee Co., noted:

In most stores there has been a tendency in the last few years to run their advertising percent higher than gross profit and other expenses justify. We believe that it is a sound policy to place greater emphasis on good salesmanship, good assortments, and good interior displays in an effort to stimulate repeat business, gradually reducing the expenditure through newspapers to a proper percentage to sales.<sup>50</sup>

Similarly, a Filene’s manager confided to a British visitor in 1930 that 50 per cent of their turnover was traced directly to advertising and they felt it should not be so. The visitor (S. Schofield of the Leeds store Schofield’s) noted that many other stores he had visited on his North American tour were also developing their turnover on these lines.<sup>51</sup> Department stores were aware of their competitors’ advertising spends - it was relatively easy to compare the column inches purchased by rival stores in local newspapers to their own, while broader data were available via the national bench-marking exercises of store expenditure and performance undertaken from 1920, which enjoyed widespread participation among department stores.<sup>52</sup>

Perceptions that rising advertising budgets were not being translated into improvements in sales and profits were corroborated by the growing volume of quantitative data. According to the U.S. Census of Business, between 1929 and 1935 American department store numbers, and sales, had declined from 4,221-4,201 and \$4,350 million - \$3,311 million respectively.<sup>53</sup> Meanwhile the interwar years witnessed a long-term trend towards higher ratios of advertising (and of total store expenses) to sales, low (and often

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<sup>49</sup> Pasermadjian, *Department Store*, p.58; Hendrickson, *Grand Emporiums*, pp. 71-3; Benson, *Counter Cultures*, p.32

<sup>50</sup> Baker Library Archives, M.ss 776, papers of the Higbee Co., letter, E. H. Stewart to C. L. Bradley, 21 Feb. 1934.

<sup>51</sup> West Yorkshire Archive service, Leeds. WYL/1262/16, Schofields Department Store, Leeds, S. Schofield’s journal of a tour of North America, visiting department stores, entry for September 1930 (exact date not given).

<sup>52</sup> Elvins, *Sales and Celebrations*, pp. 54-6.

<sup>53</sup> U.S. Department of Commerce, Census of Business, 1935, *Retail Distribution*, Vol. IV, p.23 & Vol. VI, p.177, cited in Hyppes (1937), p.76.

negative) department store profits, and a decline in market share relative to the expanding chain stores.<sup>54</sup>

**[Figure 2 near here]**

Figure 2 examines the growth of advertising expenditure by store size, using the published Harvard Bureau of Business Research (hereafter HBBR) data. The upward trend in advertising expenditure over the period to 1932, identified in Figure 1, is evident for all department store size bands. Furthermore the advertising intensity of department stores actually rose with store size, for stores with net sales of up to \$4 million. Beyond this range the relationship is less clear, possibly owing to economies of scale when advertising in newspapers covering larger populations.

**[Table 1 near here]**

The interrelationships between store size, advertising expenditures, and other key performance indicators, are explored in more detail in Table 1. This shows average values for the full HBBR sample over the period 1932-39 (detailed data were not available for all size groups shown prior to this date). The positive relationship between store size and proportionate advertising spend is shown to be entirely due to press advertising. This rose sharply with store size, while proportionate spending on other forms of advertising remained roughly constant. The positive relationship between advertising expenditure and store size was matched by a rise in total operating expenses and gross margins. Larger stores charged a higher mark-up over costs, which compensated for their higher expenses ratios – allowing them to earn a better (though still negative) net operating profit and a higher net gain than their smaller counterparts.<sup>55</sup>

Larger stores' superior financial performance appears to be strongly linked to their higher stock-turn rates. The largest stores turned their stock over 5.4 times per year, roughly double the rate for stores with sales of under \$300,000. This also enabled them to achieve double their smallest counterparts' sales per square foot, thus compensating for their much higher real estate costs (owing to more expensive sites in the centres of major cities and higher spend on buildings and fittings for America's 'grand emporiums').

Maximising stock-turn (and aggregate sales, which was very closely linked) was seen by contemporary department store managers as being key to success. For example a 1930

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<sup>54</sup> McNair and May, *American Department Store*, Table III-1, 22-23.

<sup>55</sup> Net gain includes operating profits, plus other income: from leased departments and from any non-retailing operations; credit on imputed interest previously charged as expense (after adjustment for interest actually received and paid); accounts receivable handling charges paid; and other miscellaneous income and outgo. See McNair and May, *American Department Store*, p. 20.

Macy's document noted that its undercutting policy (prices being set at least 6 per cent below those of competing stores, for comparable merchandise) was not sustained by its *cash only* policy (the administrative savings from which were not great), or bulk purchasing (much of which was in fact hand-to-mouth). Instead the key factors were their high sales volume and rapid stock-turn.<sup>56</sup> The post-1918 trend towards the extension of fashion-appeal from premium to middle and even lower-priced ranges of clothing and related goods increased the emphasis on stock-turn. For example, S. Schofield was informed by managers at Detroit's J. L. Hudson Store that sale days were held at the end of each month, where they, "really slaughter the prices, the whole policy being to get stock moving quicker..."<sup>57</sup>

Similarly, when visiting Filene's, he was told that the store achieved a stock-turn on its fashion items ranging from 7 to 15, while the rate for the whole store was 6 times. This owed much to Filene's policy of rapid markdowns, where after 10 days all fashion goods were inspected and marked down to next zone price.<sup>58</sup> Filene's 'Automatic Bargain Basement' was even more focused on maximising stock-turn, its business model being, 'to force a large volume of sales by rapid turnover of stock, at prices lower than those of any regular or unusual competition'.<sup>59</sup> To achieve this they operated a ruthless discounting policy, where all stock was automatically marked down by 25% after 12 selling days; then if not sold in another 18 days by a further 25%, if still in stock at the end of 24 days by another 25% and - if not sold after 30 selling days- donated to charity.<sup>60</sup>

Conversely, the growing emphasis on fashion aggravated the Higbee company's problems of slow stock-turn. For example, a 1932 analysis noted its large stocks of merchandise more than six months old. In part, this represented stock which had become obsolete: 'in the case of dresses and millinery there should be very little merchandise at any time over 2 months old. When apparel passes this age, the presentation of it to customers in

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<sup>56</sup> Baker Library, Harvard, Mss 776, R.H. Macy & Co. Papers., Series III, Box 5, documentary history, item 112. Note by Mr Faller, Controllers Office, 1930.

<sup>57</sup> West Yorkshire Archive service, Leeds, WYL/1262/16. S. Schofield's journal of a tour of North America, visiting department stores, entry for 8th Sept. 1930.

<sup>58</sup> West Yorkshire Archive service, Leeds, WYL/1262/16. S. Schofield's journal of a tour of North America, visiting department stores, entry for Sept. 1930 (no exact date given). This 'automatic' pricing scheme appears to have remained unchanged as late as 1979 – Hendrickson, *Grand Emporiums*, p. 130.

<sup>59</sup> Worcester Historical Museum, William Filene's Sons Co., 'Fundamental merchandise policies - basement', memorandum (1928).

<sup>60</sup> Ibid; West Yorkshire Archive service, Leeds, WYL/1262/16. S. Schofield's journal of a tour of North America, visiting department stores, entry for Sept. 1930 (no exact date given). This 'automatic' pricing scheme appears to have remained unchanged as late as 1979 – Hendrickson, *The Grand Emporiums*, p. 130.

large quantities, unless offered at ridiculously low prices, is likely to be very injurious to a store's reputation.'<sup>61</sup>

Advertising was used as a targeted weapon to bring stock-turn, and sales, up to capacity; as the Publicity Manager of the J. L. Hudson Store explained to Schofield, they cut back advertising expenditure each year after around December 10<sup>th</sup>, 'of course because the store can be filled without advertising.'<sup>62</sup> Yet the seasonal nature of demand meant that stores could rarely operate at capacity for more than a short period of each year, while seasonal troughs in sales were also periods of low returns to advertising. Evidence for Chicago indicates that department store advertising closely followed seasonal changes in sales volumes, falling sharply during July-August to a trough of around 70 per cent of its mean annual figure, then recovering strongly in the following months to a December peak; thereafter falling sharply in January-February and reaching a more moderate peak in the spring months.<sup>63</sup>

## ANALYSING THE RETURNS TO DEPARTMENT STORE ADVERTISING

The following analysis focuses on two main elements – the returns to stores' own advertising spend, and whether advertising rivalry reduced own store sales, (i.e. whether rival advertising is a strategic substitute). There is a substantial empirical literature on estimating the impact of advertising on sales or market share and on advertising rivalry.<sup>64</sup> Some authors have used the estimated response function to determine optimal spending levels, though results concerning advertising rivalry have been mixed.<sup>65</sup> For example, John E. Kwoka found that rivalry *increased* own firm sales using a sample of US automobile firms. In effect, Kwoka's results indicate that advertising has the effect of stimulating aggregate sales and is therefore a *strategic complement*.<sup>66</sup> Not surprisingly this is exactly what advertisers

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<sup>61</sup> Baker Library, Harvard, M.ss 776, Higbee Company papers, analysis and comments on merchandise and supply inventories, 10th-15th October, 1932.

<sup>62</sup> West Yorkshire Archive service, Leeds, WYL/1262/16. S. Schofield's journal of a tour of North America, visiting department stores, entry for 8th Sept. 1930.

<sup>63</sup> Cover, J.H., M. A. Browne, G. Norris, and V. J. Cohenour (1931), 'Department store sales and advertising', *Journal of Business of the University of Chicago*, 4(3), 227-44, pp.234-5.

<sup>64</sup> See, for example, Tremblay, "Strategic Groups"; Nelson, Siegfried and Howell, "Simultaneous Equations Model"; Kwoka, "Sales and Competitive Effects"; Slade, "Product Rivalry"; Thomas, "Incumbent Firms' Response"; Alston, Freebairn and James "Beggery-thy-neighbour' Advertising".

<sup>65</sup> Carpenter et. al., "Modelling Asymmetric Competition".

<sup>66</sup> Kwoka (1993) is not alone in finding rivalry to raise model sales. Tremblay (1985) also found a positive effect on rival sales in a similarly mature market – the US beer market.

themselves were arguing.<sup>67</sup> Indeed, it was often presumed that, by expanding demand, advertising would increase stores' turnover - thereby enabling them to lower prices without reducing profits. It was not only advertising executives who espoused what was effectively the common view.<sup>68</sup> Yet later empirical work is less positive. Evidence from a number of industries has found that advertising by one firm takes market share from rivals and that advertising is therefore a *strategic substitute*.<sup>69</sup>

Table 2 shows data for the stores incorporated into the HBBR "25 Year Study"; broken down by state, city, the name of the store, the identifier allocated by the HBBR, and data on sales and advertising. For every store we have complete information over the full twenty years that constitutes our period of analysis. Annual average sales and advertising data are illustrated for stores over the whole 1920-39 period, but are also broken into two sub-periods. The choice of break reflects the sharp fall in sales associated to the Great Depression, but also provides a means to analyse the relationship between advertising and sales over the interwar period and = determine the extent to which there was a shift in returns to advertising spends.<sup>70</sup> Comparing the two sub-periods, there were clearly level falls in both sales revenue and advertising spend, suggesting that the periods differed. Equally clear is that advertising relative to sales, summarised by the advertising-sales ratio, increased, near uniformly, across the sample, with only two of the twenty nine stores recording moderate falls.

### [Table 2 near here]

To get an idea of the extent to which the "25 Year Study" is representative of the general time series trends in department store sales over the period, we compare the Federal Reserve's department store sales index with an index calculated using the "25 Year Study" data in Figure 3.<sup>71</sup> Monthly Federal data (based on the Census definition of a department store) are shown in the continuous series, while the white squares plot the annual HBBR sales index (both based at 1920=100).<sup>72</sup> Certainly the "25 Year Study" index tracks the Fed series well, mirroring its turning points consistently.

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<sup>67</sup> An excellent source being found in Ralph M. Hower's case study of N.W. Ayer and Son, *History of an Advertising Agency: N.W. Ayer and Son at Work: 1869-1949*. Cambridge MA: Harvard University Press, 1966.

<sup>68</sup> For example, Hotchkiss in a paper published in the *American Economic Review*, argued that with all advertising were suddenly eliminated, prices would actually rise because demand would be smaller ("Economic Defence of Advertising", *American Economic Review*, 1925).

<sup>69</sup> For example, Slade, "Product Rivalry"; Thomas, "Incumbent Firms".

<sup>70</sup> Romer, "The Great Crash".

<sup>71</sup> U.S. Federal Reserve, *Federal Reserve Bulletin*.

<sup>72</sup> As the 1929 Census states "Department stores are classified as such if they sell \$100,000 or more of merchandise annually (exclusive of food departments); otherwise they are defined as general merchandise



[Figure 3 near here]

While the Federal Reserve data are informative in allowing us to examine the representativeness of the data from a time series perspective, they tell us less about the geographical distribution of sales. Certainly the most informative, and by definition complete, data are the U.S. Censuses of Distribution.<sup>73</sup> Given that the number of stores contained in the “25 Year Study” is not extensive for purposes of comparison, we aggregated the Census data into the four Census groups, Northeast, South, Midwest and Western. We also identify a fourth grouping of urban centres, comprising eleven cities for which the US Census provides disaggregated data, as we would expect that stores located in these centres would have higher sales and advertising rates.<sup>74</sup>

Table 3 provides a breakdown of the number of stores, sales, advertising and stock-turn, derived from the “25 Year Study” in the top panel, with comparative information from the Census of Distribution. The Census data are averaged over the three cross-sections available but while the *amount* of sales falls substantially from the 1929 to 1935 samples (rising again by 1939) the *distribution* of sales across regions and cities in the Census remains quite stable, as we will illustrate later. The Table brings out a number of salient features that we will need to keep in mind both in the analysis and interpretation of the findings. In particular, the “25 Year Study” comprises stores that are on average larger, are based in the eleven key urban centres, and are located disproportionately in the Northeast. These trends reflect the fact that, as Census data show, stores in the North-East were larger, as were “city” stores, with the “25 Year Study” containing a larger proportion of both North-eastern and urban stores (and encompassing three Boston stores, including Filenes).

[Table 3 near here]

To understand the relationship between own and rival advertising we examined both static and dynamic panel models, using instrumental variables to account for endogeneity issues. Since advertising affects sales, and in turn sales revenues fund advertising, endogeneity is an important issue for the analysis.<sup>75</sup> Furthermore, stock turn - the frequency

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stores” (U.S. Bureau of Census (1932), *Census of Distribution, Chapter II – Definitions and General Explanation of Terms*, p4). The Federal Reserve data also excludes special mail-order houses as does the Harvard studies analyzed in this paper (Federal Reserve (1944), p544).

<sup>73</sup> US Bureau of The Census, *Fifteenth Census*; *idem*, *Sixteenth Census* (this also contains data for 1935).

<sup>74</sup> The cities being Los Angeles, San Francisco, Chicago, Baltimore, Boston, Detroit, St Louis, Cleveland, Philadelphia, Pittsburgh, and Milwaukee.

<sup>75</sup> Not accounting for endogeneity is thus known to lead to biased and inconsistent estimates (Schmalensee, *Economics of Advertising*, pp. 98-100).

with which goods are sold (i.e. the number of times the stock is turned over each year) - is endogenously related to sales. Both the static and dynamic estimates employ instrumental variable methods to ensure consistent estimates. In particular we examine fixed and random effect models in static specification frameworks, and a dynamic model.<sup>76</sup> A feature of both sets of models is that they subsume, or difference out, elements that are constant over time. This is a potentially important feature, as it captures the impact of fixed factors such as urban and regional location, which we are aware are not representatively captured in the “25 Year Study” dataset. Specifically, in order to provide baseline estimates to compare the dynamic results against we estimate a static model of the form

$$q_{it} = \beta_1 a_{it} + \beta_3 riv\_a_{i,t} + \beta_4 stock_{i,t} + \nu_i + \varepsilon_{it} \quad i = 1, \dots, N \quad t = 1, \dots, T_i \quad (1)$$

where individual store sales,  $i$ , in period  $t$ ,  $q_{it}$ , are determined by current advertising,  $a_{i,t}$  the advertising of rivals in a given state,  $riv\_a_{i,t}$ , and stock turn,  $stock_{i,t}$ , and where  $\nu_i$  is the panel-level effect, and  $\varepsilon_{it}$  are i.i.d. over the who sample with a variance  $\sigma_\varepsilon^2$ .<sup>77</sup> All estimations include year effects to capture economy-wide shocks in any given year. The dynamic individual effects autoregressive model is of the form

$$q_{it} = \beta_0 \sum_j^p q_{i,t-j} + \beta_1 a_{it} + \beta_2 a_{i,t-1} + \beta_3 riv\_a_{i,t} + \beta_4 stock_{i,t} + \nu_i + \varepsilon_{it} \quad i = 1, \dots, N \quad t = 1, \dots, T_i \quad (2)$$

with a lagged dependent variable in the dynamic model,  $\sum_j^p q_{i,t-j}$  below, that are absent from the static framework.<sup>78</sup>

#### [Table 4 near here]

The full set of results is contained in Table 4. For the static estimation we adopted an IV fixed effects strategy, with stores acting as the fixed effect, and all variables being instrumented by one period lags.<sup>79</sup> If the full impact of advertising on sales is felt within the first year, estimating equation (2) can appropriately characterise the relationships between these variables. The first column in Table 4 refers to the (log) sales equation, with all variables being instrumented by one period lags of the endogenous variables. Column 1, the static version of the model in equation 1, shows that variation in stores' sales, over the full

<sup>76</sup> Arellano and Bond, “Some Tests of Specification”.

<sup>77</sup> For a more detailed account of these models see Woodbridge *Econometric Analysis*, pp. 247-291.

<sup>78</sup> See Arellano and Bond, “Some Tests of Specification” and Arellano, *Panel Data Econometrics*.

<sup>79</sup> The fixed effects specification is preferred as Hausman testing rejected the random effects model in support of fixed effects.

1920-1930 period, is explained by the variation in the current values of the quality-adjusted prices and advertising expenditures and stock-turn. The parameters of most importance are the own and rival advertising and stock-turn variables. Not surprisingly, given the extensive high quality data at our disposal, we are able to obtain well-defined estimates. Since both the dependent and independent variables are expressed in logs, the coefficients can be interpreted as elasticities. The results imply that the sales returns to advertising are quite high, as are the gains to expanding stock-turn; however, there is no indication that rival advertising is either predatory or expansionary.

The static results take no account of the persistence of sales across time, which are captured via the use of lagged dependent variables. To overcome these potential consistency issues, we take first differences in Equation (2) to control for unobservable model-specific effects and then estimate using a general method of moments (GMM). Arellano and Bond show that, in the absence of serial correlation, the most efficient set of instruments are found using the lagged values of  $q_{it}$ ,  $A_{it}$  and  $stock_{it}$  from  $t-2$  and hence these are the instruments we adopt.<sup>80</sup> Moreover, we also treat the variable stock-turn as endogenous and use lagged stock-turn interactions as instruments. Column 2 displays the results, which are markedly different from the fixed effect estimates - with the coefficients of the variables of interest in the dynamic model being considerably lower. These findings reflect the importance of accounting for persistence of sales and advertising across time and hence that the fixed effects estimations are inconsistent. Reassuringly, the Sargan test accepts the validity of the instruments and the null of no serial autocorrelation of the residuals is also accepted.<sup>81</sup> Additionally, we find that the coefficient on rivals' advertising is negative, indicating that rival advertising is predatory and has a well determined impact on sales. Thus advertising rivalry is shown to be an important determinant of sales.

We turn to testing the key hypothesis that by the 1930s department stores had become locked into a competitive spiral of high advertising and promotional expenditure, plus extensive services provision, in order to meet the challenge of rival department stores. To do so, we break the sample into two subsamples, allowing us to test whether the returns to own advertising of stores fell, and, secondly, whether advertising rivalry reduced own stores' sales (i.e. that rival advertising is a strategic substitute) in the 1930s more than in the 1920s.<sup>82</sup>

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<sup>80</sup> Arellano and Bond, "Some Tests of Specification".

<sup>81</sup> Sargan, "Estimation of Economic Relationships".

<sup>82</sup> We have tested whether there are substantial shifts in coefficients if we adjust the parameters of our analysis to ensure that we are picking up a genuine decade long shift by estimating shorter panels (e.g. 1933-1939). The key coefficients remain quite stable over differing sub-periods.

Comparing between coefficients, there is a notable difference between the two sub-periods. In each case the lagged terms are significant, allowing us to focus on the dynamic estimations. Three key findings are illuminating. First, returns to stores' own advertising fell in the 1930s and fell substantially – by over 80%. Second, advertising rivalry impacted exclusively on the 1930s - when it was a significant force, potentially compelling stores to retaliate against rivals by expanding their advertising spends. Third, stock-turn, which did not have a well defined impact on store sales in the 1920s, took on a significant role during the 1930s.

### **ROBUSTNESS - STORE SIZE**

The findings indicate that there was a substantial decline in returns to own advertising and, for the 1930s at least, that advertising rivalry also played a role in reducing stores sales. An advantage of the “25 Year Study” is that it allows us to compare the same set of stores across time. A potential disadvantage is that, as was shown in Table 3, the sample does not map consistently to the Census. The three key differences are: (1) a smaller proportion of urban, ‘city’, stores; (2) that stores located in the Southern and Western Census regions were under-represented; (3) that the stores we examined were larger, in terms of sales. We use panel data methods, which incorporate or difference out fixed effects, such as regional location and whether stores are located in urban or non-urban areas. Furthermore, to check whether there are regional trends, we have interacted regional and year effects to capture these shifts, but have not found there to be any impacts on the coefficients of interest. While we can address concerns relating to the urban and North-Eastern bias in the data within our statistical methodology, the issue of store size is more problematic.

Fortunately a substantial 1920-1924 HBBR data set, the “Secretst Study”, provides us with a means to examine a wider sample of establishments so that we can directly address the extent to which store size is biasing our findings. Unlike the sample of stores available in the “25 Year Study”, this sample includes a large number of smaller establishments and thereby allows us to examine the extent to which firm size affects the returns to small stores. When we eliminate stores with sales below \$100,000 - to ensure comparability with the Census - the “Secretst Study” includes 1,933 observations, for 655 stores. Unlike the “25 Year Study”, which includes the same firm every year, the average number of years that a firm is in the sample is 2.4. By analysing this alternative data-set we are able to address whether or not our findings are representative, and provide evidence for a different population of stores. Table 5 provides comparisons of Sales, Stock turn and Advertising Expenditure between the “Secretst

Study” and the first, 1929, US Census of Distribution. Comparing the study with the census reveals that the bias towards firms in the North-East remains. However, those in the North-East have similar average sales per store to the Census data. Stores in other regions have higher sales than the mean store in the Census. Despite stores’ sales being less than a third of the “25 Year” sample in regions other than the North-East, mean sales levels in the Secritst are still over 62% higher than the Census.<sup>83</sup>

**[Table 5 near here]**

Table 5 implies that there may well be differences in our overall findings due to the unrepresentative nature of the sample, since small stores have lower advertising to sales ratios and stock-turn rates. This does not in itself suggest that the marginal returns to advertising or the ability to turn over stock are going to have differing marginal returns to small or large stores, but does show that advertising behaviour differs between these two groups of stores.

In order to test these differences we take a comparable approach to that we utilised for the “25 year Study”.<sup>84</sup> However, Arellano and Bond’s dynamic panel model, used when analysing the “25 year Study” data, has been shown to produce poor results where there are many cross-sections but few periods. This is because there are fewer instruments available, as the Arellano and Bond framework uses lags and combinations of time periods and lags, therefore the number of periods analysed falls. Building on the work of Arellano and Bover which used lagged differences as potential instruments, Blundell and Bond exploit additional moment restrictions, which substantially improve on the performance of the Arellano and Bond GMM estimator in circumstances where the number of time-series observations is relatively small - as is the case for the five period “Secritst Study”.<sup>85</sup>

Results from the estimations are contained in Table 5.<sup>86</sup> In all cases the Sargan test is well-determined, supporting the specifications. The results highlight that large firms were able to extract greater returns from advertising but that, while advertising played a disproportionally important role for larger stores, stock-turn was key to the sales success of small firms.

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<sup>83</sup> We adjust sales by applying growth rates from the Federal Reserve Indices to obtain this figure. The mean sales rate is 62% higher before the adjustment for sales growth over the period is made.

<sup>84</sup> As was the case when analysing the “25 Year Study” data set, we again use the fixed effects estimator, based on it being supported by the data, relative to the random effects model

<sup>85</sup> Arellano and Bover, “Another Look”; Blundell and Bond, “Initial Conditions”. Arellano and Bond’s estimator is an efficient estimator where there are many cross-sections and many period, but has been shown to perform poorly where for short panels but is less efficient, hence our use of the Blundell and Bond/Arellano and Bover estimator with the shorter (in terms of cross-sections) “Secritst Study” panel.

<sup>86</sup> We have excluded the results from the static estimations since, as was the case with the estimates from the “25 Year Study” sample, we found that the preferred fixed effects static model provided inconsistent (inflated) coefficients.

## **CONCLUSION**

Department stores are shown to have made heavy and innovative use of advertising. This was originally employed primarily to imprint a strong retail brand image on their target market segment and build consumer loyalty via 'goodwill' or 'relationship' marketing. Yet by the 1930s department stores had become caught up in a competitive spiral of rising advertising expenditure (together with expanded services provision and cut-price sales) in an effort to boost sales volumes and meet the competitive threat from rival stores. The quantitative analysis confirms that – while advertising expenditure originally reaped substantial economic returns to department stores - by the 1930s they had become caught up in an increasingly competitive struggle to maintain market share and combat the industry-wide trend of low profits and growth. Raising advertising expenditure assisted their goals, though gains were eroded by retaliatory increases in advertising spend by rivals who were also struggling to maintain their market position.

As the econometric analysis demonstrates, returns to stores' own advertising were much lower in the 1930s than in the 1920s, while the negative impacts of increased advertising spend by rival department stores significantly eroded any gains from their own expanded advertising budgets. This contrasts with the 1920s, when rivals' advertising does not appear to have had any significant impact. Meanwhile, by focusing on competition within the department store sector, stores left themselves vulnerable to competition from the expanding chain stores and speciality retailers, who operated on a lower-cost model (which included much lower ratios of advertising to sales). Thus the department store advertising battle of the 1930s, while perfectly rational from each individual store's perspective, did not provide a long-term solution to the problems of the interwar department store. Department stores had become locked in to a high-cost regime and increasing advertising budgets ultimately only served to further raise costs and erode their competitiveness.

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**TABLE 1**  
**DEPARTMENT STORE ADVERTISING AND OPERATING STATISTICS, AVERAGE VALUES FOR 1932-39**

Sales volume (\$)	Under \$150,000	\$150,000-300,000	\$300,000-500,000	\$500,000-750,000	\$750,000-1,000,000	\$1-2 million	\$2-4 million	\$4-10 million	\$10-20 million	\$20 million or more
No. of reports	64.9	55.1	50.0	37.8	28.5	65.5	53.8	54.4	18.5	9.8
Aggregate sales (\$ thousands)	5,906.8	11,218.3	21,290.1	25,287.5	22,141.0	83,383.4	160,143.4	298,860.0	234,244.6	308,835.1
Population of city (thousands)	11.3	20.1	34.0	56.5	70.0	113.8	258.1	484.4	1,300.0	2,487.5
Gross margin	29.9	31.4	33.0	34.0	34.1	34.4	35.3	35.8	36.8	36.8
Newspaper advertising	1.5	2.1	2.4	2.7	2.9	3.2	3.5	3.7	3.4	3.1
Direct advertising	0.3	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2
Other advertising	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2
Total advertising	2.1	2.6	2.9	3.2	3.4	3.7	3.9	4.2	3.9	3.4
Total Expenses	32.3	33.3	33.9	35.0	35.2	35.7	36.5	37.3	37.4	37.2
Net profit	-2.4	-1.9	-0.9	-1.1	-1.2	-1.3	-1.2	-1.5	-0.6	-0.4
Net gain (% of net sales)	0.5	1.1	2.0	2.0	2.1	2.1	2.2	2.4	3.1	3.1
Stock-turn (beginning & end inventories)	2.2	2.8	3.4	3.9	4.1	4.0	4.4	4.7	4.7	5.4
Sales per sq ft. (\$)	9.5	11.2	11.7	13.4	12.9	14.0	14.5	16.1	17.5	19.7
Real estate costs per sq. ft. (\$)	0.4	0.4	0.4	0.5	0.5	0.6	0.7	0.8	0.9	1.1
Sales per employee	6,221.3	5,912.5	5,621.3	5,583.8	5,456.3	5,556.3	5,909.4	6,085.0	6,262.5	7,027.5

Source: HBBR reports, 1932-39.

Notes: All columns are % of net sales, except where indicated otherwise.

\* Available only for 1933-34 for < \$150,000 group and for 1932-35 for \$150-300,000 group; no 1932 data available for \$750-\$1m group or >\$20 m group.

\*\* Based on a larger proportion of firms reporting than the disaggregated advertising data.

\*\*\* No 1933 data for >\$20 million group.

\*\*\* No data for < \$150,000 group in 1932-34; for \$150-300,000 group over 1934-36; for \$300-500,000 group in 1934-35; and for >\$20 m group in 1932-33.

**TABLE 2**  
**DEPARTMENT STORE SALES AND ADVERTISING, 1920-1939**

Census Region	State	City	Store	Harvard Id	1920-1939			1920-1929			1930-1939		
					Sales (\$000)	Advertising (\$000)	Advertising-Sales Ratio	Sales (\$000)	Advertising (\$000)	Advertising-Sales Ratio	Sales (\$000)	Advertising (\$000)	Advertising-Sales Ratio
Midwest	Kansas	Tapeka	Crosby Brothers Co.	223	1,248.03	23.71	1.9	1,419.45	25.80	1.8	1,076.60	21.82	2.0
	Mississippi	Oxford	J E Nielson Co.	55	176.11	0.87	0.5	218.67	0.85	0.4	137.80	0.89	0.6
	Nebraska	Lincoln	Miller and Paine	147	2,217.23	52.11	2.4	2,447.75	55.75	2.3	1,986.70	48.46	2.4
	Michigan	Detroit	Davidson Brother Co.	164	42,822.35	1,249.32	2.9	39,125.30	1,080.07	2.8	46,519.40	1,401.64	3.0
			Himelhoch Brothers and Co.	160	1,966.03	83.50	4.2	2,106.75	82.89	3.9	1,825.30	84.12	4.6
	Ohio	Cincinnati	Mabley and Darew Co.	226	4,457.10	182.10	4.1	4,400.90	187.91	4.3	4,513.30	176.87	3.9
		Cleveland	Halle Brothers Co.	158	14,295.88	473.78	3.3	14,976.15	460.41	3.1	13,615.60	487.15	3.6
		Dayton	Rike-Kumler Co.	40	6,061.18	161.93	2.7	6,549.25	153.13	2.3	5,573.10	170.73	3.1
		Portsmouth	Marting Brothers Co.	227	575.53	14.60	2.5	592.35	13.14	2.2	558.70	15.90	2.8
		Wisconsin	Milwaukee	Edward Schuster & Co Inc.	144	11,817.30	483.30	4.1	12,843.50	566.88	4.4	10,791.10	399.73
North East	Connecticut	Bridgeport	The Howland Dry Goods Co.	215	2,895.45	80.57	2.8	3,133.90	76.46	2.4	2,657.00	84.27	3.2
	Massachusetts	Boston	Conrad and Co.	221	2,954.23	178.47	6.0	2,834.85	149.85	5.3	3,073.60	204.24	6.6
			E.T. Slattery Co.	11	2,451.53	117.71	4.8	2,610.35	123.48	4.7	2,292.70	111.94	4.9
			Williams Filenen's Sons Co.	170	25,393.55	693.76	2.7	26,759.70	635.67	2.4	24,027.40	746.05	3.1
	New York	Binghamton	Fowler, Dick and Walker Inc.	276	1,672.30	47.83	2.9	1,896.10	46.69	2.5	1,448.50	48.86	3.4
		Johnstown	Penn Traffic Company	36	3,195.45	72.52	2.3	3,785.90	71.79	1.9	2,605.00	73.25	2.8
		Poughkeepsie	Luckey Platt & Co.	20	1,658.03	41.02	2.5	1,908.95	44.93	2.4	1,407.10	37.50	2.7
	Pennsylvania	Erie	Trask, Precott and Richardson Co.	133	1,100.68	32.07	2.9	1,306.75	34.72	2.7	894.60	29.42	3.3
		Lancaster	Hager and Brother	210	1,029.03	33.05	3.2	1,108.45	32.44	2.9	949.60	33.60	3.5
			Watt and Shand	228	2,151.03	50.44	2.3	2,335.35	54.31	2.3	1,966.70	46.96	2.4
Pittsburgh		Kaufman Dept Store, Inc.	161	24,879.15	718.20	2.9	27,484.60	816.74	3.0	22,273.70	619.66	2.8	
			The Rosenbaum Co. of Pittsburgh	198	9,887.93	471.90	4.8	13,274.55	581.70	4.4	6,501.30	373.08	5.7
South	Rhode Island	Providence	Gladding's	64	2,118.95	71.82	3.4	2,275.70	65.97	2.9	1,962.20	77.67	4.0
	Maryland	Baltimore	Hutzler Bos Co.	98	7,560.25	184.58	2.4	6,735.50	165.17	2.5	8,385.00	203.99	2.4
	Texas	Brenham	H.F. Hohlt Co.	19	270.90	2.99	1.1	328.00	3.56	1.1	213.80	2.42	1.1
	West Virginia	Wheeling	Stone and Thomas	148	2,109.73	50.33	2.4	2,403.75	55.42	2.3	1,815.70	45.24	2.5
Western	California	San Diego	The Marston Company	212	3,408.93	69.54	2.0	3,787.15	78.27	2.1	3,030.70	61.68	2.0
		San Francisco	Massy's	252	4,104.18	174.12	4.2	3,948.05	169.58	4.3	4,260.30	178.21	4.2
	Washington	Seattle	The Bon Marche	211	7,199.83	228.90	3.2	7,510.45	216.64	2.9	6,889.20	239.93	3.5
Average					5,808.56	188.76	3.2	6,275.88	195.51	3.0	5,341.25	182.10	3.4

**TABLE 3**  
**COMPARISONS OF SALES, STOCK TURN AND ADVERTISING EXPENDITURE:**  
**THE HBBR "25 YEAR STUDY" AND THE AVERAGED US CENSUS OF**  
**DISTRIBUTION DATA (1929, 1935 AND 1939).**

**HBBR "25 Year Survey"**

Census Region	No. Stores (% of total)	Sales (% of total)	Sales per store (\$)	Stock Turn	Advertising (% of total)	Advertising- Sales Ratio
Northeast	45	42	8,564	4.4	43	3.1
Midwest	31	45	6,261	5.0	45	3.1
South	14	5	3,314	4.1	4	2.4
West	10	8	4,904	3.8	8	3.1
Total	100	100			100	
Cities	38	17	12,875		18	3.2
Amounts	580	\$191.7	6,610	4.3	\$5.9	3.1

**Census of Distribution (1929, 1935, 1939)**

Census Region	No. Stores (% of total)	Sales (% of total)	Sales per store (\$)
Northeast	23	34	1,378
Midwest	36	38	984
South	27	15	532
West	15	13	807
Total	100	100	
Cities	6	34	5,255
Amounts	4,149	\$38,212	3,702

Sources: McNair and May, *American Department Store*; U.S. Bureau of Census, *Fifteenth Census*; *ibid*, *Sixteenth Census*.

Notes:

1. The three Census returns are averaged to provide as complete coverage as feasible.
2. 'Amounts' is comprised of the number of stores, and the dollar amount of sales and advertising (\$mn) and the average stock-turn and advertising-sales ratio.
3. "Cities" comprise eleven cities that the US Census provide disaggregated data for. The cities being Los Angeles, San Francisco, Chicago, Baltimore, Boston, Detroit, St Louis, Cleveland, Philadelphia, Pittsburgh, and Milwaukee.

**TABLE 4**  
**ESTIMATES FROM THE “25 YEAR STUDY” (1920-1930. t-STATISTICS IN PARENTHESIS)**

Dep. var.:Log sales	1920-1939				1920-1929				1930-1939			
	Fixed Effects		Dynamic Estimates		Fixed Effects		Dynamic Estimates		Fixed Effects		Dynamic Estimates	
	(1)		(2)		(3)		(4)		(5)		(6)	
log advertising	0.385	(15.35)	0.215	(10.90)	0.439	(9.95)	0.274	(9.35)	0.233	(8.91)	0.146	(7.24)
log advertising (-1)			0.131	(5.98)			-0.031	(0.87)			0.072	(3.08)
log rival advertising	-0.004	(0.95)	-0.008	(2.84)	-0.002	(0.28)	-0.003	(0.64)	-0.007	(1.32)	-0.006	(2.74)
log stock turn	0.126	(5.66)	0.042	(2.60)	0.086	(3.43)	0.018	(1.04)	0.214	(5.99)	0.226	(7.56)
log sales (-1)			0.661	(16.20)			0.261	(3.15)			0.586	(11.65)
Constant	6.126	(49.68)	0.004	(3.44)	6.577	(39.17)	0.017	(6.99)	6.861	(51.12)	-0.010	(5.95)
Year effects	YES		YES		YES		YES		YES		YES	
N	580		522		290		261		290		261	
R <sup>2</sup> -adj	0.912				0.913				0.8658			
e'e	149.5				22.89				113.85			
Hausman test	238.4				235.39				-477.41			
Sargan test			243.78				83.58				197.21	
2 <sup>nd</sup> order serial correlation			-0.79				0.05				-0.68	
Wald test			3903.39				185.29				4366.65	

*Notes (Static estimation):* 1. All equations include store-specific fixed effects. 2. One period lags are used as instrumental variables for each variable.

In order to ease visual comparison the static results are not included in the lagged column. 3. Results are robust to heteroskedasticity.

*Notes (Dynamic estimation):* 1. All models estimated in first-differences by instrumental variables (GMM). Instrument used is (t-2) back on sales and advertising. 2. All results are robust to heteroskedasticity. 3. Test for instruments validity (Sargan) and for 2on order serial correlation are described in Arellano and Bond (1991). 3. Wald test for jointly significant coefficients of variables excluded constant term.

**TABLE 5**  
**COMPARISONS OF SALES, STOCK TURN AND ADVERTISING EXPENDITURE: “SECRETST STUDY” AND THE US CENSUS OF DISTRIBUTION (1929)**

<b>HBBR 1920-1924 (average)</b>							<b>Census of Distribution (1929)</b>			
Census Region	No. Stores (% of total)	Sales (% of total)	Sales per store (\$)	Stock Turn	Advertising (% of total)	Advertising- Sales Ratio	Census Region	No. Stores (% of total)	Sales (% of total)	Sales per store (\$)
Northeast	39	43	1,899	3.6	41	2.8	Northeast	21	36	1,806
Midwest	34	30	1,520	3.0	33	3.2	Midwest	39	39	1,041
South	15	12	1,379	3.2	11	2.7	South	25	13	523
West	13	15	2,060	2.9	15	2.8	West	15	12	841
Total %	100	100			100		Total %	100	100	
Cities	11	44	7,066	3.2	11.2	0.7	Cities	6	36	6,034
Amounts	461	\$790	1,715	3.2	231	2.9	Amounts	4,062	\$42,144	

<b>HBBR 1920-1924 (Upper 50% of Sales Distribution)</b>							<b>HBBR 1920-1924 (Lower 50% of Sales Distribution)</b>						
Census Region	No. Stores (% of total)	Sales (% of total)	Sales per store (\$)	Stock Turn	Advertising (% of total)	Advertising- Sales Ratio	Census Region	No. Stores (% of total)	Sales (% of total)	Sales per store (\$)	Stock Turn	Advertising (% of total)	Advertising- Sales Ratio
Northeast	33	41	7,029	4.1	40	3.0	Northeast	41	48	620	3.4	9	2.4
Midwest	30	30	5,768	4.1	33	3.3	Midwest	35	29	435	2.8	6	2.8
South	17	12	3,882	4.1	11	2.8	South	13	14	529	2.9	3	2.4
West	19	17	5,016	3.7	16	2.8	West	10	9	445	2.4	2	2.5
Total	100	100			100	3.0	Total	100	100			20	2.6
Amounts	121	\$692	5,712	4.1	20,952	3.0	Amounts	340	\$178		2.7	4,563	2.6

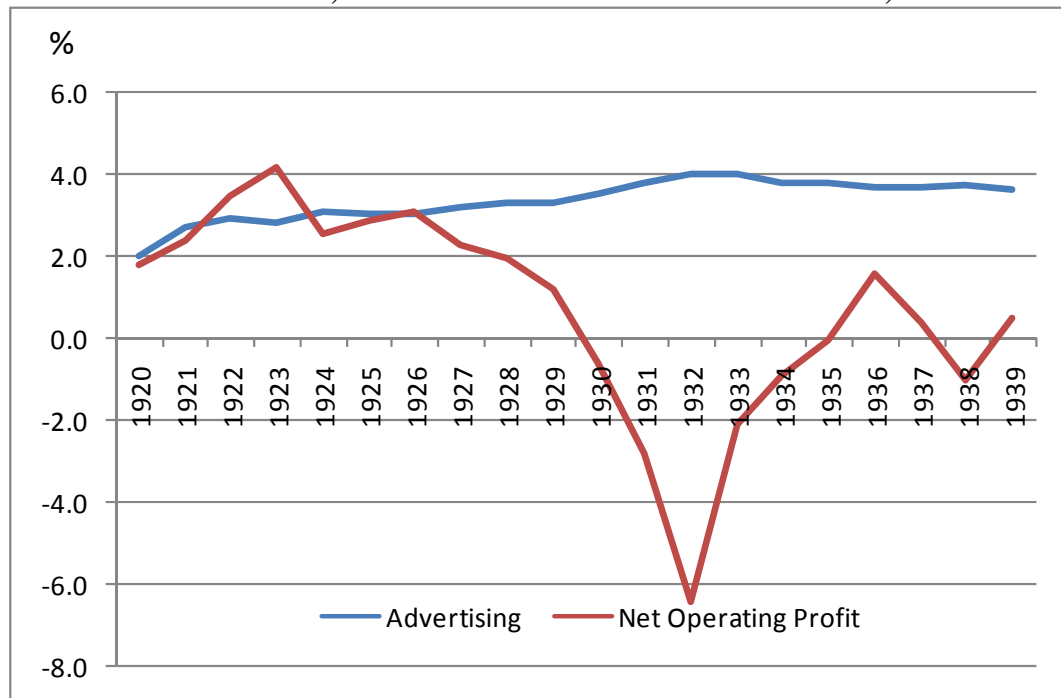
*Notes:* see Table 2.

**TABLE 6**  
**ESTIMATES FROM THE “SECRETST STUDY” (1920-1924. T-STATISTICS IN PARENTHESIS)**

	1920-1924		1920-1924 (Upper 50%)		1920-1924 (Lower 50%)	
<b>Dep. var.:Log sales</b>	<b>(1)</b>		<b>(2)</b>		<b>(3)</b>	
log advertising	0.233	(10.55)	0.431	(19.30)	0.136	(4.55)
log advertising (-1)	-0.051	(0.88)	-0.064	(0.50)	0.053	(0.69)
log rival advertising	0.004	(0.63)	-0.009	(0.88)	0.012	(1.85)
log stock turn	0.086	(4.23)	0.024	(1.12)	0.285	(5.80)
log sales (-1)	0.338	(2.31)	-0.197	(1.18)	0.034	(0.15)
Constant	2.834	(2.54)	8.748	(2.43)	5.950	(2.55)
Year effects	YES		YES		YES	
N	780		231		549	
Sargan test	25.86		3.99		6.78	
2 <sup>nd</sup> order serial correlation	-0.27		0.93		-0.56	
Wald test	332.97		441.28		366.65	

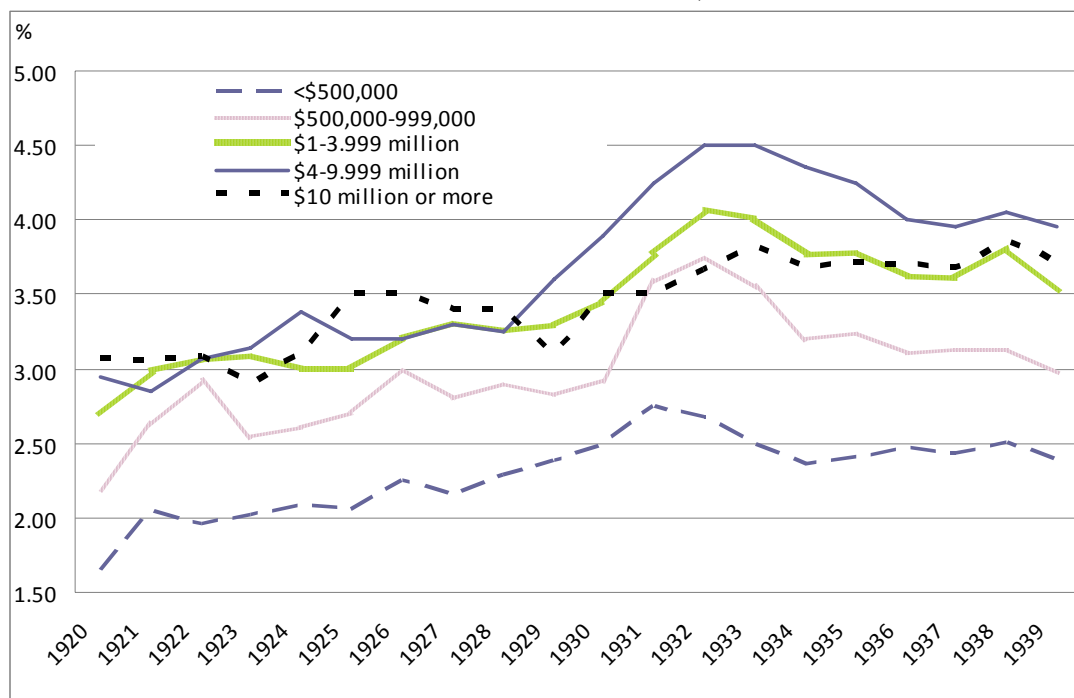
*Notes (Dynamic estimation):* 1. All models estimated in first-differences by instrumental variables (GMM). Instrument used is (t-2) back on sales and advertising. The estimation utilises Arellano-Bover/Blundell-Bond linear dynamic panel-data estimator (Blundell and Bond, 1998). 3. Wald test for jointly significant coefficients of variables excluded constant term. 4. All results are robust to heteroskedasticity. 5. Test for instruments validity (Sargan) and for 2nd order serial correlation in Blundell and Bond (1998).

**FIGURE 1**  
**ADVERTISING AND NET OPERATING PROFITS FOR U.S. DEPARTMENT**  
**STORES, AS A PERCENTAGE OF NET SALES, 1920-39.**



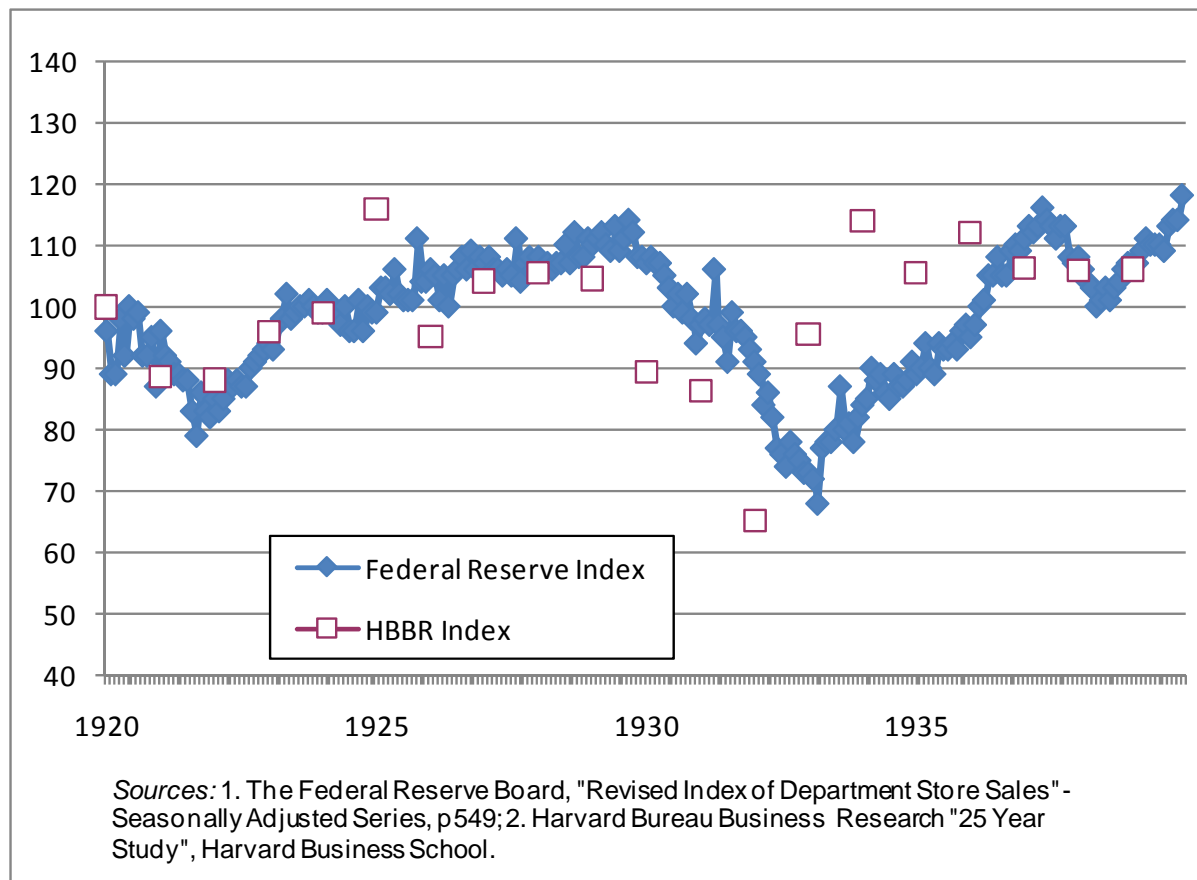
Source: McNair and May (1963), *The American Department Store 1920-1960 - Performance Analysis Based on the Harvard Reports*, Table III-1, 22-23.

**FIGURE 2**  
**ADVERTISING EXPENDITURE AS A PROPORTION OF NET SALES, BY SIZE OF**  
**DEPARTMENT STORE, 1920-1939**



Sources: 1920-24, calculated using original returns from the "Secritst Study"; subsequent years, Harvard Bureau of Business Research Bulletin (1925-1939).

**FIGURE 3**  
**DEPARTMENT STORE SALES INDICES (1920-1939): COMPARISON OF**  
**FEDERAL RESERVE AND HARVARD BUREAU OF BUSINESS RESEARCH**  
**DATA**





# APPENDIX 1

## COMPLETE SAMPLE OF THE HBBR DEPARTMENT STORE STUDIES (1920-1939)

State/ Province	City	Store	Harvard Identifier	Years in sample	No. Years
Alabama	Birmingham	Louis Pizitz Dry Goods Company	141	1920-1924	4
		Loveman, Joseph and Loeb	350	1921-1924	4
	Troy	Rosenberg Bro.	359	1921-1924	4
Arizona	Douglas	Levy Bros. Dry Goods Co. Inc.	430	1921-1924	4
	Phoenix	Korriek's Dry Goods Co.	349	1921-1922	2
Arkansas	Fort Smith	Wolf-Pollock Dry Goods Co.	168	1921-1924	3
		Seamon Store Co.	609	1922-1924	3
		WoodCo.ck and Lawson Dry Goods Co.	186	1920-1924	5
	Hot Springs	Z T Matthew and Son	152	1920-1924	4
	Jonesboro	Joe D Back and Brother	451	1921-1922	2
		Pfeifer Bros. Inc.	874	1929-1939	22
	Little Rock	Schober-Martin Dry Goods Co.	328	1921-1924	4
	Pine Bluff	Ben F Smith Dry Goods Co.	475	1922-1922	1
	Texarkana	Unidentified	678	1922-1922	1
	Anaheim	J F Hink & Son, Inc.	143	1920-1920	1
California	Berkeley	G O Donogh and Son	213	1920-1924	4
		Verney Bros. Inc.	464	1920-1924	4
	El Centro	Daly Bros.	577	1922-1924	3
	Eureka	Radin and Kamp, Inc.	13	1920-1922	3
		Einotein's Inc	197	1920-1924	5
	Fresno	Buffunis?	72	1920-1924	3
		The Wall Co.	352	1921-1921	1
	Los Angeles	Millisone?	154	1920-1922	3
		Bullock's Inc.	412	1921-1924	4
	Modesto	J W Robinson	114	1920-1924	5
		G P Schafer Co.	232	1921-1923	3
	Napa	Unidentified	42	1920-1921	2
		Winship Beard Co.	17	1920-1924	5
	Oakland	Basburg	516	1922-1924	3
		Whitthome and Swan	272	1920-1924	5
	Ontario	H C Capwell Co.	150	1920-1939	16
		P E Ostran & Co.	662	1922-1922	1
	Pacific Grove	Holman's Dept Store Inc.	91	1920-1922	3
	Placerville	A K Gwisler Co.	353	1921-1924	4
	Redlands	Harris Company	416	1921-1924	4
	Riverside	G Rouse and Co.	216	1920-1922	3
	Sacramento	Weinstock,Lubin and Co. Inc.	205	1920-1923	4
	San Diego	The Marston Company	212	1920-1939	20
		Holzwasser Inc.	515	1922-1924	3
	San Francisco	Raphael Weil and Co.	49	1920-1939	15
		Massy's	252	1920-1939	20
		Unidentified	301	1921-1921	1
		L Magnin & Co., Inc.	385	1921-1924	4
		The Emporium	387	1921-1939	15
		City of Paris Dry Good Co.	597	1922-1924	3
		Roos Bros. Inc.	785	1929-1939	22
		O A Hale and Co.	593	1922-1924	3
		Riley-Crocker Co.	444	1921-1924	4
		Levy Brothers	202	1920-1924	4
	San Jose	Allient's Inc.	85	1920-1924	3
	San Luis Obispo	Rankin Dry Goods Co.	92	1920-1920	1
	San Mateo	Smith and Lang	199	1920-1930	11
	San Rafael	Berg's	658	1922-1922	1
	Santa Ana	J J Atwood Co.	96	1920-1930	11
	Stockton	S Sweet-Company Inc.	109	1920-1921	2
	Turlock	Charles Ford Co.	381	1921-1924	4
	Upland	Kaufman's	619	1922-1924	3
	Visalia	A S Lewis and Son Dry Goods Co.	242	1920-1924	4
	Watsonville	May Daniels and Fisher Stores Co.	438	1921-1924	4
Colorado	Colorado Springs	Denver Dry Goods Co.	436	1921-1939	15
		The Edmonds Dry Goods Co.	504	1922-1924	3
		White and Davis	547	1922-1924	3
	Denver	The Howland Dry Goods Co.	215	1920-1939	20
		D M Read Co.	414	1921-1924	4
	Fort Collins	The Smith-Murray Co.	351	1921-1924	4
	Pueblo				
	Bridgeport				
Connecticut	Bridgeport				

State/ Province	City	Store	Harvard Identifier	Years in sample	No Years
Connecticut (con't)	Bristol	Muzzy Bros. Co.	631	1922-1924	2
	Danbury	John McLean Inc.	1039	1929-1939	22
	Derby	John H Brewster Co.	441	1921-1921	1
		Howard and Banber Co.	339	1921-1924	4
	Hartford	Albert Steiger Inc.	1024	1920-1939	30
		Sage, Allenn and Co.	1018	1920-1939	40
	Meriden	Chas Co.	1031	1921-1924	8
	New Haven	Shartenberg and Tobinso Co.	265	1920-1924	5
		The Edmard Malley Co.	253	1920-1930	11
		Gamble-Desmond Co.	453	1921-1924	4
	Norwich	Portenous and Mitchell	107	1920-1923	4
		Reid and Hughs Co.	1015	1920-1924	10
	Putnam	Bugbee and Wuef	400	1921-1924	4
	South Manchester	J W Hale	257	1920-1930	11
	Torrington	W W Mertz Company	250	1920-1924	3
	Waterbury	Howland and Hughs	274.15	1929-1939	22
	Unidentified	Unidentified	274.18	1920-1920	1
		Unidentified	274.17	1920-1921	2
		Unidentified	274.25	1920-1921	2
		Unidentified	274.19	1920-1922	2
		Unidentified	274.33	1920-1922	3
		Unidentified	1017	1921-1922	2
		Unidentified	1017	1921-1922	2
Florida	Barton	Charles A Earnest Mercantile Co.	650	1922-1922	1
	Fort Myers	The M Flossie Hill Co. Inc.	536	1922-1922	1
	Miami	Burdine's Inc.	611	1922-1924	3
Georgia	Atlanta	Davison-Paxon Co.	183	1920-1921	2
		J M High Company	138	1920-1930	11
		Rich's Inc.	1290	1929-1939	22
	Columbia	J A Kirven Co.	189	1920-1930	11
	Gainesville	Fierson-McEven Co.	474	1922-1924	3
	Macon	Burden, Smith and Co.	38	1920-1930	11
	Maretta	Florences	488	1922-1924	3
	Rome	The Fahy Store	408	1921-1924	4
	Hawaii	Hilo Emporium, Ltd.	145	1920-1924	5
	Honolulu	The Liberty House	587	1922-1924	3
Idaho	Blackfoot	Brown Hart Co. Ltd	22	1921-1924	4
	Boise	The Mode Ltd	47	1920-1924	4
	Lewiston	Bratton-Morris Co.	617	1922-1924	3
	Moscow	David's Inc.	14	1920-1930	11
Illinois	Pocatello	Fargo-Wilson-Wells Co.	366	1921-1924	4
	Aurora	Co.oper Brothers	24	1920-1923	3
	Beandstown	Kuhl Dry Goods Co.	111	1920-1924	5
	Belleville	Joseph Saenger Mercantile Company	142	1920-1924	5
	Carbondale	Johnson's Inc.	578	1922-1922	1
	Champaign	W Lewis and Co.	234	1920-1924	4
	Chicago	Schreffler Stone Efficiency Co.	129	1920-1921	2
		Boersma Co.	126	1920-1924	5
		Joun Drum	683	1922-1922	1
		Becker Ryan & Co.	680	1922-1924	6
		Mandel Bros. Inc.	1416	1929-1939	22
		Wiebalt(t) Stores Inc.	1203	1929-1939	22
		Linn and Scruggs Co.	188	1921-1939	13
		Unidentified	635	1922-1922	1
		Joseph C Spiess Co.	1183	1929-1939	22
		Lord's	127	1920-1924	3
	Galesbury	Kellogg, Drake and Company	249	1920-1924	5
	Joillet	Stern's Big Store	132	1920-1920	1
		Unidentified	610	1922-1922	1
		Dinet and Co.	483	1922-1922	1
		L W Cline and Co.	110	1920-1923	4
	Lichfield	Henley Alden Co.	342	1921-1921	1
		A T Stewart and Co.	399	1921-1924	4
	Macomb	Lundt and Co.	220	1920-1921	2
	Moline	E B Co.lwell Co.	424	1921-1922	2
	Monmouth	John C Allen Co.	521	1922-1924	3
	Mount Carmel	J G Stansfield Sons	549	1922-1924	3
	New Philadelphia	S S Urfer Dry Goods Co.	419	1921-1921	1

State/ Province	City	Store	Harvard Identifier	Years in sample	No Years
Illinois (con't)	Peterburg	Ross A Nanee Co.	537	1922-1924	3
	Ploria	Clarke and Co.	519	1922-1924	3
	Quincy	Halbach-Schroeder and Co.	512	1922-1922	1
	Rushville	The George Little Co.	322	1921-1924	4
	Springfield	R F Herndon and Co.	217	1920-1924	5
	Sterling	The J K Chester Co.	368	1921-1924	3
Indiana	Elkhardt	Zielsen Bro Co.	130	1920-1930	11
	Frankfort	The M B Thrasher Co.	332	1921-1924	4
	Gashen	The Hudson Co.	334	1921-1921	1
	Indiana	Indianapolis	70	1920-1920	1
	Indianapolis	William H Block Company	565	1922-1924	3
		H P Wasson and Co. Inc.	71	1920-1924	4
	Kockomo	William H Turner Co.	422	1921-1923	3
	La Fayette	Unidentified	447	1921-1921	1
	Logansport	Wiler and Wise Inc.	277	1920-1924	5
	Marion	Boston Store	157	1920-1924	5
	Michigan City	Staigen and Donnelly	73	1920-1924	4
	Mishanwaka	M Gilbert and Sons Co. Inc.	674	1922-1924	6
	Muncie	The W.A. Mc Naughton Co.	542	1922-1924	3
	New Albany	S W Newburger and Company	300	1922-1924	3
	Rensselaer	G E Murray and Co.	153	1920-1930	11
	South Bend	George Wyman and Co.	458	1921-1924	4
		Unidentified	480	1922-1922	1
	Sullivan	Springer-Gouekenour Co. (see 1903)	116	1920-1924	4
	Sullivan	Will A Thompson and Son	406	1921-1924	4
	Winchester	The W E Miller Co.	598	1922-1924	3
Iowa	Alden	Fred L Spencer & Co.	471	1922-1924	3
	Cedar Rapids	The Denecke Co.	397	1921-1921	1
		The Killian Co.	75	1920-1924	5
	Clinton	John D Van Alland and Son Inc.	54	1920-1924	5
	Davenport	M.L Parker Co.	2	1920-1920	1
	Des Moines	Harris-Emery Co.	278	1920-1924	5
		Younger Brothers	264	1920-1939	14
		Unidentified	379	1921-1921	1
	Dubugue	J F Stamper Co. Inc.	117	1920-1920	1
	Eldora	C M Haas Co.	104	1922-1924	3
	Fort Dodge	Gates Dry Goods Company	121	1920-1924	5
		Tuerke Mercantile Co.	4	1920-1930	11
		The Boston Store	315	1921-1921	1
	Fort Madison	Dodge?	165	1920-1924	4
	Mason City	Manley Bor. Co.	418	1921-1924	4
		Merkel Co.	561	1922-1924	3
	Monticello	George Stuhler's Sons Co.	218	1920-1920	1
	Sheldon	Starrett Bros Inc	682	1922-1924	5
	Sioux City	J L Hudson	163	1920-1930	11
		Unidentified	452	1921-1921	1
		Pelletier Co.	600	1922-1922	1
	Spencer	Moulton, Fee & Co.	31	1920-1922	3
	Storm Lake	Staple Stores	468	1922-1922	1
		W L McNeal	606	1922-1922	1
	Woodbine	Siebels' Dept Store	484	1922-1924	3
Kansas	Arkansas	Newman Dry Goods Co.	454	1921-1924	4
		Peoples Store	543	1922-1924	3
	Concordia	Austin Dry Goods	326	1921-1924	4
	Emporia	Rorabaugh Paxton Dry Goods Co.	497	1922-1924	3
	Fort Scott	W.J. Calhoun Dry Goods Co.	18	1920-1930	11
	Hiawatha	Adams Mercantile Co.	25	1920-1924	5
	Hutchinson	Pegues-Wright Dry Goods Co.	100	1920-1921	2
	Leavenworth	Ettensen-Winning Dry Goods Co.	648	1922-1922	1
	Liberal	Frank G Boles	491	1922-1922	1
	Sterling	A L Mincer	404	1921-1922	2
	Tapeka	Crosby Brothers Co.	223	1920-1939	20
		The Pelletier Stores Co.	308	1921-1939	15
	Wellington	The Fashion (Sehabinger and Baker)	622	1922-1922	1
	Wichita	The George Innes Co.	175	1920-1920	1

State/ Province	City	Store	Harvard Identifier	Years in sample	No. Years	
Kansas (con't)	Wichita (con't)	Coombs Mercantile Co.	51	1921-1924	4	
	Winfield	The M B Kerr Dry Goods Co.	333	1921-1921	1	
		J B Lynn & Son	615	1922-1924	3	
Kentucky	Carrollton	Howe Bros., Inc.	620	1922-1924	3	
	Covington	John R Co.ppin Co. Inc.	780	1929-1939	22	
	Hapkinsville	J H Anderson Co. Inc.	467	1922-1924	3	
	Louisville	Nerman Strauss and Sons Co.	362	1921-1924	4	
	Madisonville	The McLeod Store	15	1920-1924	5	
	Paduchah	F A Rudy & Sons	647	1922-1924	3	
	Paneah	E Guthrie Co.	382	1921-1921	1	
Louisiana	New Orleans	Maison Blanche	390	1921-1939	15	
		D H Holmes Co. Ltd.	373	1921-1939	15	
		Shreveport	M Groner and Co.	445	1921-1921	1
		Rubenstien Bro.	316	1921-1921	1	
		Hearne Dry Goods Co.Ltd	248	1922-1924	3	
Maine	Augusta	D W Adams Co.	274.01	1920-1939	40	
	Canibon	Ray N L Brown	274.04	1921-1921	1	
	Lewiston	B Beck Co.	274.32	1921-1924	4	
	Portland	Owen Moore and Co.	1000	1920-1922	3	
		Porteons Mitchell, Braum Co.	340	1921-1924	4	
		Grant Knowler?	320	1921-1924	4	
	Rumford	Everett Day Co.	235	1920-1930	22	
	Waterville	The Emery Brown Co.	310	1922-1922	1	
	Unidentified	Unidentified	314	1920-1922	2	
		Unidentified	1003	1920-1922	3	
		Unidentified	592	1922-1922	1	
	Maryland	Baltimore	L Slesinger and Son Inc.	240	1920-1924	4
			Hutzler Bos Co.	98	1920-1939	20
O'Neill and Co. Inc.			365	1921-1924	4	
Stewart & Co.			684	1922-1922	1	
Massachusetts	Forest Hills	E Tucker & Co.	585	1922-1922	1	
	Boston	Unidentified	103	1920-1920	1	
		J W Eadie Jr. (accountant)	266	1920-1920	1	
		J D Whitney Co.	97	1920-1924	4	
		Manaham Inc	263	1920-1924	5	
		R H White Company	137	1920-1924	5	
		Jordan Marsh CompanyCronin Co.	180	1920-1924	5	
		Gilchrist Co.	195	1920-1930	11	
		E.T. Slattery Co.	11	1920-1939	20	
		Co.nrad and Co.	221	1920-1939	20	
		William Filene's Sons Co.	170	1920-1939	20	
		Unidentified	636	1922-1922	1	
		R N Stearns Co.	281	1922-1924	3	
		The Shepard Stores Co.	687	1922-1924	6	
	Brockton	Unidentified	43	1920-1920	1	
		James Edgar Co.	386	1921-1921	1	
		Fraser Dry Goods Company	297	1921-1924	4	
		Mailman Hanlon & Cullen	1027	1921-1924	8	
	Cambridge	Harvard Co.operative Society Inc.	259	1920-1939	13	
		John H Co.nCo.ram & Co. Inc	1032	1921-1939	30	
		see 274-34	507	1922-1922	1	
	East Boston	? H F Brown	1025	1920-1924	10	
		WalCo.tt and Co.	1034	1921-1924	8	
	Fall River	Stieger and Co.x Co.	1021	1920-1930	22	
	Fritchburg	Nichols and Frost	269	1920-1924	5	
	Haverhill	Simmonds and Adams	1012	1920-1922	6	
		Mitchell and Co. Inc.	1010	1920-1930	22	
		Leslie Dry Goods Co.	1009	1920-1930	22	
	Holyoke	Albert Steiger Inc.	1014	1920-1924	10	
	Laurence	The Cross Dry Goods Co.	335	1921-1924	4	
	Lawerence	Mailman Hanlon & Cullen	1013	1920-1923	8	
	Lowell	Bon Manchi Dry Good Co.	74	1920-1930	11	
	Lynn	P.B.Magrane Store, Inc.	39	1920-1930	11	
		Spalding Dry Goods Co.	1011	1920-1930	22	
		T W Rogers Co.	1044	1929-1939	22	
		Burrow and Sanborn	1008	1920-1924	10	

State/ Province	City	Store	Harvard Identifier	Years in sample	No. Years
Massachusetts (con't)	Marlboro	W M A Allen Co.	1001	1920-1930	22
	New Bedford	Charles H Co.x Company	1023	1920-1930	22
	Pittsfield	England Bros.. Inc.	465	1921-1923	3
		Holden and Stone Co.	446	1921-1924	4
	Rockland	J A Rice Company Ltd	607	1922-1924	3
	Roxbury	Timothy Smith Co.	1002	1920-1924	10
	Salem	Almy, Bigelow and Washburn Inc.	1019	1920-1924	10
		W G Webber Co.	1016	1920-1930	22
	Springfield	Albert Steiger Inc.	1020	1920-1939	32
		Poole Dry Goods Co.	1026	1921-1924	8
		The Brigham Co.	312	1921-1939	15
	Waltham	Gover Cronin Inc	287	1921-1924	4
	Westfield	Beals and Co. Inc.	1029	1921-1924	8
	Worcester	Chauncy Textile Co.	1028	1921-1924	8
		John C MacInnes Co. Inc.	564	1922-1924	3
		Bannard, Summer and Putman Co.	569	1922-1924	3
		John C MacInnes Co.	1054	1929-1939	22
	Unidentified	Unidentified	274.28	1920-1920	1
		Unidentified	274.27	1920-1920	1
		Unidentified	274.03	1920-1921	2
		Unidentified	274.11	1920-1922	2
		Unidentified	274.09	1920-1922	2
		Unidentified	274.24	1920-1922	2
		Unidentified	274.22	1920-1922	2
		Unidentified	274.02	1920-1922	2
		Unidentified	274.21	1920-1922	2
		Unidentified	274.12	1920-1922	3
		Unidentified	274.26	1920-1922	3
		Unidentified	274.14	1920-1922	3
		Unidentified	274.1	1920-1922	3
		Unidentified	274.16	1920-1922	3
		Unidentified	274.2	1920-1922	3
		Unidentified	274.13	1920-1922	3
		Unidentified	1	1921-1921	1
		Unidentified	402	1921-1921	1
		Unidentified	274.29	1921-1922	2
		Unidentified	274.34	1921-1922	2
		Unidentified	274.36	1921-1922	2
		Unidentified	274.3	1922-1922	1
		Unidentified	274.31	1922-1922	1
Michigan	Alligan	Stein & Griswold Co.	641	1922-1922	1
	Alma	Dwight W Robinson	225	1920-1922	3
	Alpena	Cronin Co.	181	1920-1924	4
	Ann Arbor	Mack and Co.	247	1920-1930	11
	Battle Creek	Schroeder Bro. Co.	108	1920-1924	5
		Toeller's Dept Store	455	1921-1921	1
		The L W Robinson Co.	517	1922-1922	1
	Detroit	?-Davidson Brother Co.	164	1920-1939	20
		Himelhoch Brothers and Co.	160	1920-1939	20
		Crowby Milner and Co.	1440	1929-1939	22
	Escanabra	Boston Store Co.	583	1922-1924	3
	Flint	Smith, Bridgeman and Co.	94	1920-1923	4
	Grand Haven	Addison Baltz Co. Inc.	552	1922-1922	1
		Addison Baltz Co. Inc.	550	1922-1922	1
	Grand Rapids	Wurzburg Co.	134	1920-1921	2
		Jurgens and Holtuluwer	538	1922-1924	3
	Ionia	Allen Bros.	481	1922-1922	1
	Kalamazoo	Streng and Ginn Co.	336	1921-1924	4
	Lansing	J W Krapp Co.	63	1920-1939	14
	Lansing	Mills Dry Goods Co.	420	1921-1924	4
		F N Anbaugh Co.	522	1922-1924	3
	Ludington	Adam Drach Co.	173	1920-1922	3
	Mt. Pleasant	Charles E Hagan and Company	495	1922-1922	1
	Muskegon	The William W Hardy Co.	576	1922-1924	3
	Otsego	Kohlenstein Brothers	26	1920-1920	1
	Owasso	D M Christian Co.	204	1920-1924	3
	Port Huron	The Ballentine Dry Goods Co.	229	1920-1920	1

State/ Province	City	Store	Harvard Identifier	Years in sample	No. Years	
Michigan	Port Huron (con't)	J B Sperry Co.	237	1921-1921	1	
		L Niger and Co.	59	1920-1930	11	
	Unidentified	135	1920-1920	1		
	Unidentified	305	1921-1921	1		
	Ed F Wahl Co.	241	1920-1923	4		
	Minnesota	Minneapolis	Slack and Co.	574	1922-1924	3
			The Baker Co.	348	1921-1924	4
			L S Donaldson Co.	357	1922-1922	1
		Mannheimer Brother	179	1920-1924	5	
		Schuneman and Evans	207	1920-1924	5	
Murphy and Co.		570	1922-1924	3		
Willmar		P C Petersen and Sons	367	1921-1924	4	
Mississippi		Jackson	R.E. Kennington Co.	270	1920-1920	1
		Duluth	Duluth Glass Block Stone Inc.	69	1920-1924	5
		Hibbing	Lippman's Dept Store	530	1922-1924	3
	Jackson	Downing, Locke Co.	575	1922-1924	3	
	Kosciusko	Potts Oliver Co.	557	1922-1924	3	
	Natchez	James J Co.le and Company	48	1920-1930	11	
	Oxford	J E Nielson Co.	55	1920-1939	20	
	St Louis	The Progress Store Co.	50	1920-1924	5	
	Missouri	Brookfield	Calhoun-Halliburton Dry Goods Co.	434	1921-1921	1
		Independence	A J Bundsechu, Inc	118	1920-1924	5
Japlin		Newman Merchantile Co.	523	1922-1924	3	
Marshall		Christman Dry Goods Co.	599	1922-1924	3	
		Missouri Valley Stores Co.	338	1921-1924	4	
		Dallmeyer Dry Goods Co.	671	1922-1924	6	
Mexico		Turner's Inc.	676	1922-1924	5	
Springfield		Turner's Inc.	676	1922-1924	5	
St Joseph		Hirsch Bro. Dry Goods Co.	354	1921-1924	4	
Montana		St Louis	Nugent's	136	1920-1924	5
	Harve	Stix, Baer and Fuller	209	1920-1930	11	
		Scruggs, Vandervoort and Barney	1271	1929-1939	22	
		Bozeman	The Willson Co.	222	1920-1922	3
	Great Falls	The Paris Fligmand Co.	203	1920-1920	1	
	Helena	The Golden Ruld Store (Woodward &Co.)	627	1922-1922	1	
		F Buttrey Co.	174	1920-1920	1	
		Sander-Ferguson Co.	62	1920-1922	3	
	North Carolina	KalisPELL	New York Dry Goods	361	1921-1921	1
			KalisPELL Mercantile Co.	307	1921-1922	2
Power Merchantile Co.			672	1922-1924	6	
Leviston		Hansen's	624	1922-1922	1	
Miles City		Yellowstone Mercantile Co.	384	1921-1924	4	
Sidney		Yellowstone Mercantile Co.	384	1921-1924	4	
Asheville		Bon Marche, Inc.	27	1920-1924	4	
Greensboro		Brown-Beck Co.	155	1920-1924	5	
North Dakota		Fargo	E G Ricker Co.	89	1920-1920	1
New York		Bath	BabCo.ck-Bath Co.	274.08	1922-1922	1
	Binghamton	Hills, McLean and Haskins	274.23	1920-1930	11	
	Binghamton	Fowler, Dick and Walker Inc	470	1920-1939	20	
	Brooklyn	Heilbronn Inc.	178	1921-1924	4	
		A L Naumm and Son Co.	276	1921-1924	4	
		Mc Co.mmick Store	289	1922-1922	1	
	Buffalo	Abraham, Straus Inc.	462	1929-1939	22	
		I S Given	553	1920-1920	1	
		Wiesseman and Eiss Co.	1277	1920-1924	5	
	New York	East Rochester	Williams Hengerer Co.	172	1921-1924	4
Jahraus-Braum Co.			187	1922-1924	3	
B J Fryatt Dept Store, Inc.			383	1921-1921	1	
Elmira		S F Iszard Co.	524	1920-1923	4	
Glens Falls		Sheehan's Inc.	321	1922-1924	5	
		The Boston Sore Co.	90	1920-1924	5	

State/ Province	City	Store	Harvard Identifier	Years in sample	No. Years
New York (con't)	Glens Falls (con't)	Merkel and Gelman Inc.	691	1922-1924	3
	Gowanda	Himeleiss and Co.	56	1922-1922	1
	Hornell	C F BabCo.ck Co. Inc.	472	1921-1924	3
	Ithaca	Rothschild Brothers	490	1920-1930	11
	Jamestown	The House of Burnnett Inc.	369	1921-1924	4
	Johnstown	Unidentified	271	1921-1921	1
	Liberty	O E Keller	309	1921-1924	4
	Lockport	Williams Brothers Company	431	1920-1920	1
		Fenes Stores Inc.?	318	1921-1924	4
	Middleton	Tompkins Dry Goods Co.	166	1929-1939	22
	Mount Vernon	Genning and Campbell Inc.	330	1920-1924	4
	New Rochelle	R Ware Co.rp.	910	1920-1930	22
	New York City	Unidentified	182	1921-1921	1
		Lord and Taylor	306	1922-1924	3
		James McCutcheon and Co.	499	1922-1924	3
		Best and Co.	533	1922-1924	5
		Macys	665	1929-1939	22
		Unidentified	855	1922-1922	1
		Edward Callan	1022	1920-1924	5
		Bloomgingdal Bros, Inc.	613	1920-1939	11
	Newburgh	John Schoonmaker and Son	120	1920-1924	5
	Nyack	Harrison and Dalley	45	1920-1924	5
	Ogdensburg	Unidentified	244	1920-1920	1
		Nathan Frank's Sons	208	1922-1922	1
	Olean	Bradner's	106	1921-1921	1
	Port Chester	Steiger's Inc.	477	1920-1924	10
	Port Jervis	R Jordan Co.	311	1920-1924	5
	Poughkeepsie	Luckey Platt & Co.	1007	1920-1939	20
	Rochester	McCurdy and Co., Inc.	58	1920-1924	4
		E A Knowlton Co.	20	1920-1930	11
		B Forman Co.	194	1920-1930	11
		Duffy-Powers Inc.	99	1922-1922	1
		The Malley Co.	245	1922-1923	2
	Ticonderoga	I Rothschild	629	1922-1922	1
	Troy	The Gay Co.rporation	529	1922-1922	1
	Upper Montelair	G C Chapman and Co.	482	1922-1922	1
	Utica	G S and T Hunter	645	1921-1924	4
		John A Roberts and Company	476	1921-1924	4
	Walton	Henderson Brothers	411	1921-1924	4
	Watertown	Frank A Empsall & Co.Inc.	317	1922-1924	3
	Unidentified	Unidentified	293	1920-1922	2
	Unidentified	Unidentified	625	1920-1922	3
Nebraska	Bayared	Flower Cash Dept Store	649	1922-1922	1
	Beatrice	The Mercer B Walker D.G.Co.	500	1922-1922	1
	Fairbury	Jenkin Crooks Co.	67	1920-1923	4
	Holdridge	The F Johnson Company	370	1921-1924	3
	Lincoln	Miller and Paine	149	1920-1920	1
		Rudge and Guenzel Co.	5	1920-1924	5
		Miller and Paine	147	1920-1939	20
		Gold and Company	388	1921-1922	2
		The Herpolsheimer Co.	440	1921-1924	4
		Speier and Simon	602	1922-1922	1
	McCook	H C Clapp's Store	417	1921-1924	3
	Omaha	Thompson Belden and Co.	77	1920-1924	4
	Scottsbluff	Fliesbach and Sons	546	1922-1924	3
	Fallon	Grye, Ried and Company, Inc.	10	1920-1920	1
Nevada	Concordia	Hary G Emmons Inc.	274.06	1920-1939	40
New Hampshire	Gardiner	D W Adams Co.	274.07	1921-1939	30
	Manchester	Manchester Dry Goods Co.	274.05	1920-1939	40
	Nashua	Speare Dry Goods Co.	274.35	1921-1921	1
	Portsmouth	G E French	274.37	1921-1923	6
	Unidentified	Unidentified	1004	1920-1921	2
		Unidentified	1030	1920-1922	3
		Unidentified	1006	1920-1922	3
		Unidentified	341	1921-1922	2
		Unidentified	1033	1922-1922	1

State/ Province	City	Store	Harvard Identifier	Years in sample	No. Years
New Jersey	Asbury	Steinbach Co.	378	1921-1922	2
	Bridgeton	Stiles and Son	401	1921-1921	1
	Jersey City	Wonder Stores Inc.	604	1922-1922	1
	Newwalk	L Bamberger and Co.	1446	1929-1939	22
New Mexico		Hahne and Co.	1438	1929-1939	22
	Alamogordo	G J Wolfinger	184	1920-1922	3
	Albuquerque	Kistler Co. Ilistter and Co.	518	1922-1922	1
	Belen	The John Becker Co.	663	1922-1924	6
North Carolina	Ashville	M V Moore and Co.	460	1921-1924	4
	Charlotte	Ivey's of Charlotte	956	1929-1939	22
	Durham	R L Baldwin Co.	664	1922-1922	1
	Greensboro	Meyer's Co.	539	1922-1922	1
North Dakota	Pinehurst	Pinehurst Inc.	506	1922-1922	1
	Bottineau	Ertresvaag's	505	1922-1922	1
	Dickinson	Ried Bros. Inc.	634	1922-1924	3
	Fargo	Herbst Department Stores	254	1920-1920	1
Ohio	Grand Forks	Odell Co.	591	1922-1924	3
	Akron	A Polsky Co.	78	1920-1924	5
		The Hower Co.	410	1921-1924	4
		The Yeager Co.	393	1921-1924	4
	Alliance	The Spring-Holzworth Co.	344	1921-1924	4
	Arcanum	The M L Winsenberger	478	1922-1924	3
	Cambridge	Potter, Davis Company	487	1922-1924	3
	Canton	The Stern and Mann Co.	167	1920-1923	4
		Klein -Heffelman-Gallans Co.	442	1921-1924	4
	Cincinnati	Rollman and Sons Co.	246	1920-1924	5
		Mabley and Darew Co.	226	1920-1939	20
		Unidentified	303	1921-1921	1
		Hanke Brothers Co.	219	1921-1921	1
		Unidentified	642	1922-1922	1
		The H S Pogue Co.	1269	1929-1939	22
	Cleveland	Fries and Schuele Co.	193	1920-1924	5
		Lindner Company	125	1920-1930	11
		The Stearn Co.	28	1920-1930	11
		The Bailey Co.	159	1920-1939	12
		Halle Brothers Co.,	158	1920-1939	20
	Columbus	The F&R Lazarus Co.	535	1922-1924	3
		Morehouse-Martens Co.	667	1922-1924	6
		The Union Co.	936	1929-1938	10
	Covington	George Worley	568	1922-1922	1
	Dayton	Rike-Kumler Co.	40	1920-1939	20
		Elder and Johnston Co.	391	1921-1924	3
		The Louis Traxler Co.	377	1921-1924	4
	Delaware	Morrison Dry Goods Company	191	1920-1920	1
	Delphos	J N Lange and Co.	224	1920-1920	1
	Findlay	Patterson's	421	1922-1922	2
	Franklin	E.B. Thirkield and Sons Co.	9	1920-1920	1
	Greenville	Palace Dept Store	177	1920-1924	4
	Hicksville	Boon Bevinton Co.	560	1922-1924	3
	Kenton	D B Nourse and Son Co.	291	1921-1921	1
		D B Nourse and Son Co.	292	1921-1921	1
	Lima	The Leader Store	639	1922-1922	1
	Marion	Uhler-Phillips Co.	105	1920-1930	11
	Mount Gilead	White House Dry Goods Store (White & Bra	30	1920-1922	3
	Mt Vernon	J S Ringwalt Co.	206	1920-1924	5
	Newark	The W H Mazey Co.	558	1922-1924	3
	Norwalk	Lewis M Pries	675	1922-1924	6
	Portsmouth	Marting Brothers Co.	227	1920-1939	20
		Co.oper Bros	638	1922-1924	3
	Sandusky	The R M and C B WilCo.x Co.	239	1920-1924	5
	Springfield	Fahiem-Leham Co.	331	1921-1924	4
	Toledo	The Nauhausel Bros. Co.	432	1921-1924	4
		Lamson Bros. Co.	433	1921-1939	15
		La Salle and Koch Co.	415	1921-1939	15
	Van Wert	The Bonnewitz Co.	295	1921-1924	4
	Warren	Warner Co.	88	1920-1922	3



State/ Province	City	Store	Harvard Identifier	Years in sample	No. Years
Ohio (con't)	Warren (con't)	The Griswold Company	345	1921-1921	1
		Frank L Stuton Co.	140	1920-1922	3
		Craig Brothers Co.	185	1920-1924	5
	Xenia	Jolie Borthers Co.	95	1920-1924	5
	Youngstown	G M McKelvey Co.	230	1920-1923	4
Oklahoma		The Strouss Hirshberg Co.	192	1920-1930	11
	Anadarks	Fair Dept Store	486	1922-1924	3
	Muskogu	Durmil Dry Goods Co.	435	1921-1939	14
	Stillwater	Fisher Dept Store	690	1922-1922	1
	Temple	B&O Cash Store	494	1922-1924	3
	Tulsa	Vandevors Dry Goods Co.	68	1920-1924	4
		Halliburton-Abbott Co.	146	1920-1924	5
Oregon	Vinita	Sander-Ridgeway Co.	113	1920-1930	11
	Albany	L E & H J Hamilton	656	1922-1922	1
	Medford	Manns's Dept Store	659	1922-1924	6
	Oregon City	Price Bros Dept Store	666	1922-1922	1
	Portland	Lipman, Wolfe and Co.	590	1922-1939	14
Pennsylvania	Salem	Rostein and Greenbaum	514	1922-1924	3
	Ashley	Charles Tremayne	171	1920-1923	4
	Bethlehem	The Bush and Bull Co.rp.	596	1922-1924	3
	Butler	Alfred Reiber & Bros. Co.	633	1922-1924	3
	Cannonsbury	The Welty Store	586	1922-1924	3
	Chanlrio	Thomas P Tweed Co.	323	1921-1924	4
	Du Bois	Broadbent-Martin Co.	44	1920-1924	5
	Easton	William Laubach and Sons	162	1920-1930	11
		The Easter Bon Ton	313	1921-1924	4
	Erie	Trask, PreCo.tt and Richardson Co.	133	1920-1939	20
	Greenville	Tillotson Dry Goods Co.	551	1922-1922	1
	Johnstown	Penn Traffic Company	36	1920-1939	20
		Andrew Foster Estate	403	1921-1921	1
	Knoxville	G W Lugg and Co.	261	1920-1924	5
	Lancaster	Hager and Brother	210	1920-1939	20
		Watt and Shand	228	1920-1939	20
		M T Garwin and Co.	394	1921-1921	1
		M T Garwin and Co.	395	1921-1924	4
	Lewistown	E E McMeen and Co.	479	1922-1924	3
	McKeesport	The Famous	376	1921-1922	2
	Mechanicsburg	D.N.Biddle and Son	7	1922-1922	1
	Milton	Lewisson's	290	1921-1921	1
	Monessen	A R Ney Co.	363	1921-1921	1
	New Castle	J N Emmer's Sons Sons	279	1920-1920	1
	Norristown	Kennedy's Inc.	489	1922-1922	1
	Philadelphia	Blanner's	275	1920-1922	2
		B F Denices?	262	1920-1930	11
		The Blum Store	1119	1936-1939	8
	Pittsburgh	Harris Department Store	273	1920-1922	2
		Joseph Home Co.	1447	1929-1939	22
		Gimbel Bros	1356	1929-1939	22
		Kaufman Dept Store, Inc.	161	1920-1939	20
		The Rosenbaum Co. of Pittsburgh	198	1920-1939	20
		Boggs and Buhl	437	1921-1924	4
	Reading	C K Whitner and Company	251	1920-1921	2
		Ellis Mills	450	1921-1924	4
		Pomeroy's Inc.	572	1922-1924	3
	Roaring Spring	Roaring Spring Dept. Store	509	1922-1922	1
	Scanton	Cheland-Simpson Co.	1273	1929-1939	22
	Seranton	The Heinz Store	123	1920-1924	5
	Sharon	W W Moore Company	258	1920-1930	11
		M Fitzpatrick Co.	669	1922-1924	6
	Stroudsburg	A B Wyckoff	556	1922-1924	3
	Tamaqua	Scheid's Dept Store	469	1922-1924	3
	Uniontown	Wright-Metzler Co.	449	1921-1924	4
	Waynesboro	Besone Dry Goods Company Inc.	268	1920-1924	5
	Wilkes Barre	The Isaac Long Store	628	1922-1922	1
	Williamsport	Bush and Bull Co.	233	1920-1924	4
	Unidentified	Unidentified	280	1920-1922	3

State/ Province	City	Store	Harvard Identifier	Years in sample	No. Years
Rhode Island	Pawtucket	McDevitt's Inc.	274.38	1921-1921	1
		Jones and Co.	337	1920-1924	5
		Gladding's	12	1920-1939	20
		The Outlet Co.	64	1922-1939	23
		The Shipard Co.	677	1929-1939	22
S Carolina	Woonsocket	The Harris Mowry Company	1127	1920-1924	5
	Unidentified	Unidentified	260	1922-1922	1
	Greenville	C D Stradley and Co. Inc.	60	1920-1920	1
	Spartanburg	Aug W Smith Co.	156	1920-1939	15
	Aberdeen	The Olwin-Angell Store	371	1921-1924	3
South Dakota	Lake Andes	G F Buche Co.	621	1922-1924	3
	Lead	Hearst Mercantile Co.	493	1922-1922	1
	Michell	A F McGovern and Sons	492	1922-1922	1
	Rapid City	? Hill Co.	1248	1929-1939	22
	Sioux Falls	Freese-Rohde Co.	644	1922-1922	1
Tennessee	Bristol	H P King Co.	508	1922-1924	3
	Chattanooga	Unidentified	41	1920-1920	1
		D B Loueman Co.	231	1920-1921	2
	Columbia	Anderson Bros & Foster	688	1922-1922	1
	Jackson	Rosenbloom Brothers Company	238	1920-1924	5
Texas	Johnson City	?	325	1921-1924	4
	Knoxville	Rich's	618	1922-1924	3
	Memphis	Bry-Block Merchantile Co.	429	1921-1924	4
		B Lowenstein & Bros. Inc.	603	1922-1922	1
	Austin	E M Scanbrough and Sons	79	1920-1924	4
		Bahn Bros.	768	1929-1939	22
	Belton	Co.chran, Blair and Potts	485	1922-1922	1
	Brenham	H.F. Hohlt Co.	19	1920-1939	20
		Winkelmann and Bohne	540	1922-1924	3
	Consicana	K Wolens Dept Store	545	1922-1924	3
	Dallas	A Harris and Co.	324	1921-1939	15
		W A Green Co.	922	1929-1939	22
		Neiman-Niarcus Co.	978	1929-1939	22
	Denton	The Williams Store	501	1922-1924	3
	EL Paso	The Boston Store	503	1922-1922	1
	Fort Wayne	Wolf & Dessaner Co.	1318	1929-1939	22
	Fort Worth	The Fair of Texas Co.	122	1920-1920	1
		W C Stripling Co.	176	1920-1920	1
		H C Meacham and Co.	356	1921-1924	4
		L G Gilbert and Co.	544	1922-1924	3
		The Fair of Texas Co.	679	1922-1939	23
	Gainesville	J O Patterson	661	1922-1922	1
	Greenville	Graham-Fagg Co.	347	1921-1924	4
	Houston	W C Mumm Co.	87	1920-1920	1
		Harris-Hahlo Co.	541	1922-1924	3
	Lancaster	F M Hammond Co.	52	1920-1924	4
	Longview	J.F.Stuckey Co.	32	1920-1920	1
	Newcastle	Thomas, Slaton and Burris	425	1921-1921	1
	Paris	Burton Peel Dry Goods Co.	510	1922-1922	1
	San Antonio	Wolff and Munx Co.	101	1920-1921	2
		Joske Bro. Co.	372	1921-1921	1
	Taylor	F W Marse and Co.	80	1920-1920	1
	Tyler	Mayer and Schmidt	358	1921-1921	1
		Sipstate Dry Goods Co.	654	1922-1922	1
	Yoakum	E Hertz	448	1921-1924	4
Utah	Salt Lake City	Keith O'Brian Inc	115	1920-1922	3
		Auerbach Co.	236	1920-1924	5
		Walker Bros Dry Goods Company	151	1920-1930	11
Vermont	Barre	Tehe Homer Fritts Co. Inc.	398	1921-1924	4
	Billows Falls	Goodnow, Jennett and Pillsbury Inc	548	1922-1924	3
	Brattleboro	Houghton and Simonds	637	1922-1924	3
	Bristol	N F Wunshee and Son	294	1921-1924	4
	Burlington	F W Abernethy	463	1921-1924	4
Virginia		E E Clerkson and Co.	589	1922-1922	1
	Lawrenceville	W S Peebles	413	1921-1924	4
	Lynchburg	Snyder and Benman Inc.	563	1922-1924	3

State/ Province	City	Store	Harvard Identifier	Years in sample	No. Years
Virginia (con't)	Norfolk	W.G. Swartz Co. Inc.	588	1922-1924	3
	Richmond	Miller and Rhoades, Inc.	201	1920-1924	5
		J B Mooby and Co.	200	1920-1924	5
Washington	Roanoke	George MacBain Co. Inc.	61	1920-1922	3
	Staunton	Bryan's Dept Store	580	1922-1939	12
	Dayton	Edwards Hindle Co.	582	1922-1924	3
	Everett	The Grand Leader Dry Goods Co.	214	1920-1924	5
	Hoguiam	William Bermingham	616	1922-1924	3
	Mt Vernon	The Woman's Department Store	605	1922-1924	4
	Ritzville	Myers-Shipley Co.	82	1920-1924	4
		Ritzville Trading Co.	630	1922-1924	3
	Seattle	Rhodes Dept Store	23	1920-1924	3
		The Bon Marche	211	1920-1939	20
	Spokane	Spokane Dry Goods Co.	255	1920-1921	2
		Kemp and Heber	169	1920-1922	3
		Whitehouse Co.	657	1922-1924	5
		E G Burgan and Son	651	1922-1924	6
	Taconna	Rhodes Bro.	427	1921-1924	4
	Vancouver	W E Carter	595	1922-1924	3
	Walla Walla	Fix Dept Store	584	1922-1922	1
Washington DC	Washington	Washington DC	46	1920-1920	1
	Yakima	W.E. Draper, Inc.	21	1920-1924	5
	Washington DC	King's Place	502	1922-1924	3
		Unidentified	256	1920-1920	1
		Woodworth and Lothrop	428	1921-1924	4
		The Hecht Co.	461	1921-1939	15
		Frank R Jelleff Inc	1212	1929-1939	22
	Charleston	Oberlan's	612	1922-1922	1
		A W Co.x Dept Store	614	1922-1922	1
	Fairmont	J M Hartley & Son Co.	131	1922-1924	3
West Virginia	Huntington	Bradshaw-Diehl Company	243	1920-1924	5
		M K Hirshman	571	1922-1922	1
		The Anderson-NewCo.mb Co.	534	1922-1939	14
	Manlington	A S Querholt and Son	466	1922-1922	1
	Wheeling	Stone and Thomas	148	1920-1939	20
		Unidentified	355	1921-1921	1
		George R Taylor Co.	531	1922-1922	1
		Goeorge E Stifel Co.	528	1922-1924	3
	Appleton	Geenan Dry Goods Company	16	1921-1924	4
	Beloit	E L Chester Co.	298	1921-1924	4
	Delavan	W W Bradley and Co.	329	1922-1924	3
		Unidentified	567	1921-1921	1
	Fond du Lac	O'Brian Dry Goods Co.	304	1922-1922	1
		John F Gruenbeck	527	1922-1922	1
	Green Bay	The White Store	566	1920-1924	5
		C W Hall Co.	29	1921-1924	4
	Keuosha	Hyolds? Dept Store Co.	456	1922-1924	3
	Kewaunee	The Duvall Co.	601	1922-1924	3
	La Crosse	William Doerflinger Co.	554	1920-1930	11
		Unidentified	81	1922-1922	1
	Madison	Kessenich's Incl	581	1922-1922	1
	Milwaukee	C Niss and Sons. Inc.	668	1921-1924	3
		T A Chapmand	392	1921-1924	4
		Edward Schuster & Co. Inc.	443	1920-1939	20
	Neenah	E E Jandrey	144	1922-1922	1
		Auspach Dept Store	689	1922-1924	4
	New London	Christy's	626	1922-1924	3
	Oshkosh	Henderson-Hoyt Co.	526	1920-1924	5
	Pontage	Carroll and Klug Inc.	267	1922-1924	3
	Racine	Gahn Dry Goods Co.	511	1920-1924	3
	Shawano	The Upham and Russel Company	57	1921-1924	4
	Sheboygan	H C Prange Co.	360	1921-1924	4
	Stoughton	Hale Dry Goods Co.	389	1920-1924	5
	Superior	Lightbody-Wingate Co.	34	1921-1923	3
		Stack and Co. Inc.	409	1922-1924	5
	Tomahawk	Standard Mercantile Co.	655	1922-1922	1

State/ Province	City	Store	Harvard Identifier	Years in sample	No. Years
Wyoming Unidentified	Two Rivers	Rivers Merchantile Co.	559	1921-1921	1
	Wanpaca	Cristy's	405	1921-1924	4
	Waukesha	Enterprise Mercantile Company	407	1920-1924	5
	Wisconsin Rapids	Johnson and Hill Co.	37	1921-1921	1
	Unidentified	Unidentified	346	1920-1920	1
	Sheridon	Stevens, Fryberger & Co.	608	1922-1924	3
	Unidentified	Unidentified	139	1920-1920	1
		Unidentified	374	1921-1921	1
		Unidentified	302	1921-1921	1
		Unidentified	274	1929-1939	11
Alberta	Edmonton South	J P Malone	84	1922-1924	3
Ontario, Canada	Chatham	Charles Austin Co. Ltd.	364	1921-1924	4
	Galt	W W Wislkinson Ltd	83	1920-1923	4
	Hamilton	Fuinch Bros. Ltd	1466	1929-1939	22
	Toronto	Murray-Kay Co. Ltd.	284	1920-1924	5
Quebec	Montreal	Henry Morgan and Co. Ltd	128	1920-1924	5
Sakatchewan	Regina	R H Williams and Son Ltd.	86	1920-1930	11
	Weyburn	F W Smith Ltd.	375	1921-1922	2